

International Economics

By

P. T. ELLSWORTH, PH.D

Associate Professor of Economics

University of Cincinnati

THE MACMILLAN COMPANY

BOMBAY CALCUTTA MADRAS

*Published September, 1938.
Tenth Printing May, 1948.*

To J. A. E.

PREFACE

This book had its origin, like many another text, in dissatisfaction with the available teaching materials. Prior to the time, some four years ago, when work on it was commenced, one of my tasks was to teach a year's course in International Economics to upper-class students in Liberal Arts. There were then available as textual aids only volumes which were rather brief and limited in scope, or which were primarily suited to the needs of Commerce students. Being convinced that an adequate understanding of the subject must rest upon a firm foundation of up-to-date theory, I found it necessary to follow the policy of assigning readings in a wide variety of sources. This procedure has, of course, many merits. Indeed, even the best textbook is no adequate substitute for first-hand acquaintance with ideas as presented by their originators. Nonetheless a systematic and well-organised text may be a useful aid to teaching, especially where classes are large and library appropriations small.

In spite of the fact that other volumes with a somewhat similar purpose have appeared since its inception, it is to be hoped that the approach and the content of this work are sufficiently different to justify its publication. Starting from the assumption that mere description of facts, or even description supplemented by a modicum of highly oversimplified theory, is inadequate to a thorough comprehension of the subject, it attempts a somewhat more ambitious task. This is to provide upper-division students with the theoretical equipment necessary to an analytical understanding of the phenomena of international economic relations and of the policies of governments bearing upon these relations. This object may be unattainable, and no doubt in part it is bound to be. Yet I am convinced that it is better to set a goal which may be impossible for a fraction of each class, but of solid .

benefit to the remainder, than to submit to the rule of the lowest common denominator.

The approach adopted with respect to the theory of international trade proper follows the lines established by Professor Bertil Ohlin, an approach which has the virtues of consistency with the general equilibrium analysis and of comprehensiveness. To provide an account of the development of theory and to furnish a contrasting background for the basic analysis, two chapters are devoted to the history of international trade theory and to the formulation of the modern "classical" or neo-Ricardian point of view. A student who has mastered the first six chapters should have a firm grasp of the principles determining the international movement of goods and services under settled conditions, as well as some appreciation of the characteristics of satisfactory analytical tools.

As a basis for understanding the complex phenomena resulting from disturbances to an established international situation, surely the price specie-flow mechanism is inadequate. Yet it is impossible, I feel, without breeding confusion, to give a diluted account of the more modern view of the mechanism of adjustment to change. Therefore in addition to two chapters on the foreign exchanges, three rather long chapters are devoted to the presentation, as I understand it, of modern received doctrine on the subject of the processes by which international adjustment to economic change is brought about.

Part II, on Policy, attempts to indicate the nature, to analyse the import, and to evaluate the significance (from the viewpoint of their effects on economic well-being) of the more important lines of governmental policy in the sphere of international economic relations.

It is not the purpose in Part I to enter into theoretical controversy, nor in Part II to undertake a detailed examination of particular national policies. The object rather has been, on the one hand to present the generally accepted results of the theoretical investigations of the past, and on the other hand to discuss critically, on the basis of the preceding account of theory, only the broader and more important

problems of national policy. For the instructor who wishes to make more thorough excursions into either field, it is hoped the suggested references at the end of each chapter will prove helpful. These are arranged, first in the order of the topics covered in the chapter to which they relate, and second in the order in which it is felt they may prove useful for further study. In addition, frequent footnote suggestions are made in the body of the various chapters to works which more fully elaborate the point under discussion or which oppose the position taken in the text. The lists of suggested references consist principally of works which, in the course of teaching this volume in mimeographed form, I have found useful as supplementary reading. It was no part of my intention to offer them as a comprehensive bibliography of the subject.

My design in writing this book was obviously not to construct new tools of economic analysis, nor even to attempt to improve upon those already in existence. Rather it was, in large part, to familiarise the student with the analytical equipment available and to acquaint him with its use. Naturally, therefore, this volume can make no claim to originality. Its purpose is exposition, not discovery. In its preparation with this end in view, I have attempted to present an accurate synthesis of certain contributions of modern scholarship. This procedure obviously necessitates considerable reliance upon the published views of other writers. If the reader feels that I lean too heavily, at certain points, upon the works of particular individuals, I can only plead that I do so because I feel their contributions represent the best or the most complete materials available.

It is my wish to take this opportunity of expressing my gratitude for aid extended in the preparation of this volume. In particular, I want to thank Professor Clifford L. James of Ohio State University and Professor Walter B. Harvey of the University of Cincinnati for their careful reading, in its earlier stages, of Part I, and for many valuable criticisms and suggestions. To my students at the University of Cincinnati who suffered as guinea pigs when the manuscript was in mimeo- .

P R E F A C E

graphed form, I must express my appreciation of their patience and fortitude. Finally, I am grateful for permission to quote, sometimes rather extensively, from volumes copyrighted by the following publishers: Harcourt, Brace and Company, Inc.; Harper & Brothers; Harvard University Press; P. S. King & Son, Ltd.; Longmans, Green & Co.; McGraw-Hill Book Company, Inc.; Oxford University Press; Sir Isaac Pitman & Sons, Limited; as well as to the following: *American Economic Review*; Foreign Policy Association Incorporated; League of Nations, Publication Department; *The Quarterly Journal of Economics*; and *The Yale Review*.

P. T. ELLSWORTH

BERKELEY, CALIFORNIA.

July 30, 1938.

TABLE OF CONTENTS

PART I. THEORY

CHAPTER		PAGE
I.	INTRODUCTION	3
	The approach adopted. Characteristics of international economic relations.	
II.	HISTORICAL DEVELOPMENT OF THE THEORY OF INTERNATIONAL TRADE	8
	Mercantilism. Mercantilist theories of foreign trade. David Hume. Adam Smith. David Ricardo. John Stuart Mill. Further refinements.	
III.	THE MODERN CLASSICAL POSITION	37
	Assumptions. Absolute, equal, and comparative differences in cost. Determination of the barter terms of trade. Refinements and qualifications: domestic <i>versus</i> international goods; money wages and real wages; non-competing groups; capital charges; varying costs; numerous commodities; numerous countries; further qualifications. Summary.	
IV.	CRITICISMS OF THE CLASSICAL APPROACH	73
	Difficulties in the use of labor or real costs as a basis for international trade theory. The assumptions <i>versus</i> the facts with respect to mobility of the factors. Static and cumbersome nature of the solution.	
V.	INTERNATIONAL TRADE AND EQUILIBRIUM THEORY	86
	Modern value theory as the basis for a new approach. Assumptions. Analysis in terms of relative differences in the supply of the productive factors. Trade under paper-currency conditions: interaction of reciprocal demands, factor supplies, and the rate of exchange. Simplification of a complex theory. Illustrations. Note on the gold-standard assumptions of the classical theory.	
VI.	SOME MODIFICATIONS AND CONSEQUENCES OF THE THEORY	105
	Economies of large-scale production. Numerous regions. Qualitative differences in the factors of production. Social conditions of production. Paper <i>versus</i> gold currency systems. Effects of international trade. Effects of obstacles to trade, especially costs of transport. Interregional and international trade.	

TABLE OF CONTENTS

CHAPTER	PAGE
VII. THE FOREIGN EXCHANGES: THE MECHANISM OF INTERNATIONAL PAYMENT AND THE BALANCE OF PAYMENTS	45
Bills of exchange and international clearance. Demand for and supply of bills of exchange. The balance of payments.	
VIII. THE FOREIGN EXCHANGES: DETERMINATION OF THE RATE OF EXCHANGE	162
General principles. "Automatic correctives" of exchange-rate fluctuations. Arbitrage. Forward foreign exchange. Summary.	
IX. THE MECHANISM OF INTERNATIONAL ADJUSTMENT UNDER GOLD-STANDARD CONDITIONS: SHORT-RUN PROCESSES OF ADJUSTMENT	175
The gold standard and its operation. Foreign exchanges under the gold standard. Balance-of-payments equilibrium. Disturbances of equilibrium in the balance of payments. Short-run processes of adjustment: short-term capital movements and the international transfer of purchasing power. Monetary effects of short-term capital movements. Short-term capital movements as a source of instability.	
X. THE MECHANISM OF INTERNATIONAL ADJUSTMENT UNDER GOLD-STANDARD CONDITIONS: LONG-RUN PROCESSES OF ADJUSTMENT	215
Relation between short-run and long-run processes of adjustment. Adjustment to international capital movements; to changes in international demands; to changes in conditions of supply; to monetary disturbances.	
XI. THE MECHANISM OF INTERNATIONAL ADJUSTMENT UNDER PAPER CURRENCY CONDITIONS	243
The doctrine of purchasing power parity. Deviations from purchasing power par. Criticisms of the doctrine. The mechanism of adjustment to various types of disturbance. Appendix: Conditioning elements in the mechanism of adjustment.	
PART II. POLICY	
I. INTRODUCTION	275
Nature of economic policy in the international field. Types of policy to be considered. Limits of economic analysis.	
II. THE CASE FOR FREE TRADE	281
The advantages of specialisation. The gain from free trade. Appendix: Real <i>versus</i> money costs as a basis for the case for free trade.	
III. THE NATURE AND EFFECTS OF TARIFFS	289
Nature of tariffs. Direct effects of import duties under different cost conditions. Indirect effects of import duties.	

TABLE OF CONTENTS

xiii

CHAPTER	PAGE
IV. THE CASE FOR PROTECTION	301
The relation between exports and imports. Arguments for protection resting on popular fallacies.	
V. THE CASE FOR PROTECTION (Continued)	324
Serious arguments: infant industries; risks of specialisation; reduction of unemployment; increasing labor's share of income; prevention of excessive urbanisation; military defense. Reasons for the spread of protection.	
VI. TARIFFS AND ADMINISTRATIVE PROTECTION	347
Customs duties. The structure of a tariff. Kinds of tariffs. Measurement of height of tariffs. Administrative protection.	
VII. COMMERCIAL TREATIES AND TARIFF BARGAINING	360
Commercial treaties; national treatment; most-favored-nation treatment. Tariff bargaining. The trade-agreements program of the United States.	
VIII. IMPORT QUOTAS AND EXCHANGE CONTROL	379
Historical background. Import quotas: nature; technique of administration; effects; uses. Exchange control: meaning; operation; the blocked account. Consequences of trade restrictions.	
IX. CLEARING AGREEMENTS	407
Reasons for appearance of clearing agreements. Their nature and operation. Tendency towards bilateral trade. Arguments for clearing agreements; appraisal of arguments.	
X. MONOPOLY AND INTERNATIONAL TRADE	424
Introduction. Imperfect competition and monopoly. Monopoly. Imperfect competition: differentiation of product. Oligopoly. International combinations: general considerations; forms of international combination; circumstances surrounding their formation; international combinations and tariffs; effects and tendencies. Dumping: nature; kinds; necessary conditions; the theory of dumping price; effects of dumping; anti-dumping duties.	
XI. INTERNATIONAL MONETARY PROBLEMS	455
International aspects of monetary problems. Operation of the gold standard: requirements; obstacles. Operation of independent paper currencies. Exchange stabilisation funds. Supposed dangers of paper currencies and their evaluation. Monetary prospects of the future.	
XII. AUTARKY, OR NATIONAL SELF-SUFFICIENCY	491
Historical background. The rationale of national self-sufficiency. Causes of the spread of autarky. Limitations and difficulties of the policy. Merits of the case. The future of specialisation and of international trade.	
INDEX	523

PART I
THEORY

CHAPTER I

INTRODUCTION

EVER since the decline of Feudalism at the end of the Middle Ages, the nation has constituted the dominant political and economic unit. Its existence has shaped the habits of thought and the attitudes of millions of individuals for some three hundred years; it has given a special form to many if not most of our economic problems. At some unforeseeable time in the future, nations may, to avoid complete extinction, be forced to surrender some significant portion of their sovereignty to a world parliament. If and when this day arrives, a cosmopolitan attitude toward the use of economic resources will be established. In the meantime, however, the conflict of national interests will continue, and decisions on matters of production, trade, finance, and money will, as in the past, be made by representatives of these interests.

If we are to influence these decisions, if possible making them more intelligent, we must be able to understand and to evaluate them. For this purpose we must have some knowledge, on the one hand of why current policies are advocated, on the other hand of what their consequences may be expected to be and what alternatives are available. It is to provide some part at least of the knowledge necessary to an understanding of these matters that this book has been written.

It is possible, of course, to approach the subject of international economic relationships from any one of a number of different directions. The nature of the approach will depend upon the interests of the student. One who is interested in the actual practices and methods of trade will require an intimate knowledge of technical details. The

economic geographer will be concerned with the background of economic resources, trade routes, and the physical movement of commodities. Since our interest is with knowledge as a basis for improving the condition of human affairs (and in part also as a means of satisfying a legitimate intellectual curiosity), our approach will be that common to all social sciences. That is, while it will be necessary to have some knowledge of the commercial and geographic aspects of international affairs, our primary concern will be with the significance of facts and with the principles which underlie them. This is merely another way of saying that our interest is theoretical and analytical. For this reason, considerable space — approximately half the volume — is devoted to theory. This portion of our study provides a foundation for understanding concrete national policies relating to international economic relations by first analysing the phenomena to which they apply. In this section of the book we deal with such questions as the determination of the prices of internationally-traded commodities, the localisation of production, the mechanism of the foreign exchanges, and the processes of adjustment to various types of disturbance to international transactions. In Part II we examine various broad policies relating to international trade and finance, such as free trade, protection, other types of trade restriction, national self-sufficiency, and the international aspects of monetary policy. An attempt is made to understand the rationale of these various policies and, on the basis of the earlier study of principles, to evaluate them as well. Attention is also directed to the technique of commercial policy.

- The procedure in most books on general economics tends to reinforce the student's natural inclination to regard international trade as something quite different and distinct from domestic trade. For the usual general textbook adopts, either explicitly or implicitly, the viewpoint of a closed economy, postponing for later and separate consideration the problems arising out of the relations between different national economies.

This tendency to accentuate the differences between domestic and international economic problems and the principles applicable to them is reenforced by the theory of international trade generally expounded: namely, the classical theory stemming from Ricardo. This approach to international trade is based on a sharp distinction as to the mobility of labor and capital within a given nation and between nations. In the former case, perfect mobility is assumed; in the latter, perfect immobility. This distinction, however, by no means fits the facts. The ability of labor and capital to move between different regions of a single country is far from complete, while a considerable degree of movement from one country to another is frequently to be observed. The interregional and the international mobility of the factors are more similar than unlike. For this reason, a type of economic analysis suited to interregional problems may be extended to problems of international scope. According to this view, the nation is, depending on its size, simply one region or a group of more or less sharply distinguishable regions, while international trade is in most essential respects closely comparable to interregional trade. This amounts to saying that international trade is not essentially different from a large proportion of trade inside a nation's borders.

The approach to international economic problems by way of interregional analysis is followed in this volume. Though based upon a distinction with respect to the mobility of labor and capital which is similar to that upon which the classical theory rests,¹ it lays less emphasis upon international differences than the latter and thereby permits a somewhat greater realism of treatment. In another way also does the approach adopted here differ from that of classical writers. Instead of formulating a separate theory of value for the analysis of international trade, the general equilibrium theory of value, almost universally used in dealing with the problems of the

¹ Within a single region perfect competition is assumed, both in the commodity markets and in the markets for the factors of production, while absence of perfect competition (or mobility) characterises the relations between separate regions, whether these are intra- or international.

domestic market, is extended to the international field. Thereby greater theoretical consistency is, it is believed, attained.

Although the essentials of international trade may be analysed by means of an extension of interregional trade theory, a number of characteristics which distinguish one national economy from another warrant a separate study of international economic problems, especially in the monetary sphere. Outstanding among these characteristics is the possession of independent systems of banking and of public finance. This does more than anything — not even excepting international immobility of the factors, which exceeds only in degree their interregional immobility — to constitute a given geographical area a distinct national economy. The existence of separate banking institutions raises the problem of transmitting payments from one economy to another, a problem which is in essential respects different when only one banking system is involved. Again, the existence of tariffs on goods entering a given country has distinct effects upon the course of trade. It is true, of course, that nations differ also as to language, laws, and customs, as well as in many other respects. These differences may exist within the boundaries of a single nation, however, without giving rise to special economic problems. It is otherwise, as we have indicated and as we shall later see, with respect to differences in banking and fiscal institutions. Disturbances arising in one country tend to spread to other countries, and in doing so, they involve these essential institutions. It is one of the chief tasks of the theory of international trade and finance to examine the mechanism by which such disturbances are transmitted and the effects they produce.

Finally, we may call attention to the fact that although reliance for purposes of analysis is in these pages placed upon a set of theoretical tools which differ in certain respects from those created by classical writers, nonetheless the classical theory is explained and developed at some length. The reason for this procedure is twofold. First, the classical

doctrines are of great importance in the history of the development of international trade theory, and second, they form a body of economic principles which still largely dominate both teaching and analysis in the field of international economics.

CHAPTER II

THE HISTORICAL DEVELOPMENT OF THE THEORY OF INTERNATIONAL TRADE

IT is well to begin the theoretical portion of our study with a survey of the genesis and historical development of the principles of international trade. There is much of interest in itself in such an investigation, as it shows the slow and piece-meal growth of understanding. More important, however, is the fact that a knowledge of how the structure of theory has grown facilitates a better understanding of the completed structure itself. Furthermore, consideration of earlier views not only discloses the roots of doctrines currently accepted by economists as valid, but also uncovers the origins of many popular fallacies as well.

The mercantilist writers of the sixteenth and seventeenth centuries were the first to develop the elements of a theory of international commerce. While economic principles of a sort are to be found in the writings of Plato, Aristotle, and Thomas Aquinas, among other earlier authors, there was no attempt at a systematic treatment of international economics. Indeed, until the time of the Mercantilists, little attention was paid to trade of any sort, partly owing to the low esteem in which mercantile pursuits were held. But by the sixteenth century, trade and traders had become important and powerful, while nations in the modern sense (non-existent in the Middle Ages) had come into being through the consolidation of petty principalities. These nations — the most important being Spain, France, Holland, and England — were extremely self-conscious and self-assertive, owing partly to their comparatively recent origin and partly to the atmosphere of strife in which they arose. This nationalism, as we

would call it today, colored all their economic views and predisposed thinkers of the day to pay especial attention to transactions between rival nations. Before proceeding to trace the development of particular doctrines, it is perhaps best to give a brief general statement of the assumptions and implications of sixteenth century Mercantilism.

MERCANTILISM

Mercantilism is a term applied to the system of commercial policy dominant in England and in many countries of the Continent in the 16th and 17th centuries, as well as to the associated body of economic doctrine. Both theory and policy were marked by a vigorous and self-assertive nationalism which placed strong emphasis on the prosperity and strength of the nation. The welfare of the latter, indeed, was regarded as something separate from and superior to the welfare of its individual subjects. The resources of the community, it was felt, existed chiefly to serve the interests of the state. Moreover, economic activity was viewed, not as a means of satisfying the wants and desires of individuals, but principally as a source of national power. "While the mediaeval conception of the object of human effort was the salvation of human souls and while economic liberalism, or laissez faire, aimed at the temporal welfare of individuals, mercantilist statesmen and writers saw in the subjects of the state means to an end, and the end was the power of the state itself."¹

The reason for the emergence in this particular period of a strongly nationalistic economic philosophy is to be found in the political and economic developments following the decay of the feudal order. This system of the Middle Ages gave way, at widely separated times in different countries, to young and struggling nations, each intent upon the creation of a unified state, and frequently embroiled in war with its rivals over trade and colonies. Inevitably kings and statesmen adopted and fostered a strongly national point of view which was like-

¹ Eli F. Heckscher, article on "Mercantilism," *Encyclopaedia of the Social Sciences*.

wise reflected in their practical political measures. Tracts and pamphlets in vast quantity poured out to justify or to criticise these concrete manifestations of the prevailing nationalistic temper, in turn influencing the direction of policy. Since it is in the views set forth in these writings that one finds the reason or rationale of Mercantilist statesmanship, we shall better understand the latter if we first examine some of the more important theoretical doctrines of the times. For while the current nationalist bias gave direction to the ideas of Mercantilist writers, their particular form was in large part determined by peculiar and widely prevalent views on economic phenomena.

The study of economics has since its earliest beginnings been concerned with the acquisition and sharing of wealth. Both the subject matter, its manner of treatment, and the conclusions reached, however, depend upon just what one regards as constituting wealth. Since the time of Adam Smith, economists have universally agreed that wealth consists of goods useful to man, yet scarce relative to his needs. Because of this initial agreement, their analysis of the causes affecting the production and the principles determining the distribution of wealth has followed a common direction and resulted in the establishment of conclusions which, in spite of violent controversy on the frontiers of knowledge, are accepted with a high degree of unanimity.

A similar unanimity attached to the doctrines of the Mercantilists, which, however, were quite different from those current today. The divergence between the conclusions of modern and of Mercantilist economic thought is in large part a consequence of the fact that their view of wealth had little in common with ours. For it gave the place of paramount importance, not to want-satisfying commodities in general, but to the precious metals. Running through most mercantile writings is a strong tendency, not merely to emphasise gold and silver, but even completely to identify wealth with these metals. Even those writers who were not always guilty of a positive identification of wealth and money can at least be

charged with a failure to distinguish at all clearly with respect to their relative social significance. The following quotations are typical of the attitude of the times:

... gold and silver is the only or most useful treasure of a nation.
... nothing but bullion imported, can make amends for bullion exported.¹

... to take the right way of judging of the increase or decrease of the riches of the nation by the trade we drive with foreigners, is to examine whether we receive money from them, or send them ours; . . .²

The great and ultimate effect of trade is not wealth at large, but particularly abundance of silver, gold, and jewels, which are not perishable, nor so mutable as other commodities, but are wealth at all times, and all places. . . .³

All other commodities end with the consumer, but money still lives, and the more hands it runs through the better; so that in a sense the use doth not destroy it, as it doth other commodities, but leaves it as it were immortal.⁴

The reason for this preferential treatment of the precious metals is not difficult to establish. It was the consequence of a simple confusion of thought, perfectly natural at the time, since economic analysis was as yet too undeveloped to penetrate beneath the surface phenomena of a comparatively recently established money economy. In such an economy, where incomes are paid in money, where a man's wealth is measured in terms of money, where all business transactions are dependent upon the use of money, it requires a rather high degree of economic sophistication to avoid attributing an excessive importance to the universal medium of exchange and measure of value. Even today, a tendency to identify money and wealth is widespread, as witnessed by the strong popular support for crackpot "share-the-wealth" schemes and for crude inflationary programs.

¹ John Pollexfen, *England and East-India Inconsistent in Their Manufactures*, 1697, pp. 18-19. Cited in Viner, *Studies in the Theory of International Trade*, p. 18.

² Joshua Gee, *The Trade and Navigation of Great-Britain Considered* (1729) 1767 ed., p. 205. Cited in Viner, *op. cit.*, p. 18.

³ Sir William Petty, *Political Arithmetick* (1690). in *Economic Writings*, I, 259-260. Cited in Viner, *op. cit.*, p. 28.

⁴ Hugh Chamberlain, *A Collection of Some Papers*, 1696, p. 9. Cited in Viner, *op. cit.*, p. 28.

In addition to this comparatively simple identification of money and wealth, other related fallacies muddled the stream of Mercantilist thought. The practice of saving, highly regarded because it led to the accumulation of wealth, was not understood as a social process resulting in the formation of capital equipment, desirable because of its capacity to aid in the production of a stream of consumable goods and services. Instead, Mercantilists looked upon saving as a simple storing-up of wealth. Naturally, therefore, the durability and high value of gold and silver made them seem especially suited to this end, while their presence in abundance was held desirable as guaranteeing to a thrifty population the means necessary to a high rate of accumulation.

Among other beliefs reenforcing the simple identification of wealth and money we may mention a widespread conviction that abundance of money provided an active stimulus to trade and production. Although this view attributes importance to money as a means rather than as an end in itself, its adherents appear not to have realised its inconsistency with the cruder doctrine.

The peculiar veneration in which the precious metals were held makes intelligible many other elements of Mercantilist thought, as well as most of their practical political measures. If money alone was wealth, if saving consisted principally in the storing-up of "treasure," if abundance of money facilitated trade and production, then a statecraft aiming at the increase of national wealth and power should certainly promote by every possible means the accumulation of a large national stock of gold and silver. We find, therefore, among the earlier Mercantilist practices (prior to the middle of the 16th century), restrictions on the export of bullion and direct regulation of the foreign exchanges.

In the course of prolonged controversy the predilection for such crude measures gave way to the doctrine for which Mercantilism is chiefly famous: namely, the balance-of-trade theory. According to this doctrine, a nation not possessed of gold and silver mines can acquire bullion only through foreign

trade, and then only if it sells abroad more than it buys. Therefore, to the end of the augmentation of the national wealth, every measure must be taken to bring about a "favorable" or export balance of trade.

In line with this principle, we find Mercantilist writers advocating and Mercantilist statesmen putting into practice heavily protective tariffs, drastic regulations of foreign commerce (as in the British Navigation Acts), and a restrictive colonial policy. The latter aimed at establishing a monopoly of the colonial trade and markets, and at the subordination, in the interests of the mother country, of colonial manufactures. Working toward the same end, but also reflecting the nationalistic spirit, was the strong emphasis on measures of national defense.

Conveniently accepting the view that laborers were naturally a lazy and dissolute lot, Mercantilist writers inveighed against high wages, urging the necessity of poverty as a stimulus to hard work. As a corollary to this doctrine, they laid great stress on the need for an abundant population, and emphasised the virtues of productive employment. The successful propagation of such views meant not only cheap and voluminous exports, but also handsome profits to their authors, many if not most of whom were actively engaged in manufacture or commerce. Even more closely related to their special viewpoint with respect to foreign trade were the attempts to control consumption, particularly of luxurious (and expensive) imported products.

With this brief general outline of Mercantilist principles and practices, we may now proceed to trace with somewhat more detail the evolution of the views of Mercantilist writers on foreign trade, which so far have been stated only in the most summary form.¹

¹ For a fuller discussion of Mercantilist doctrines and policies, the reader should consult Viner, *Studies in the Theory of International Trade*, Chapters I and II, to whose account I am much indebted. A most interesting study of certain special aspects of Mercantilism is *The Position of the Laborer in a System of Nationalism*, by E. S. Furniss. The most thoroughgoing and comprehensive work on the subject is Eli F. Heckscher's *Mercantilism*.

MERCANTILIST THEORIES OF FOREIGN TRADE

In the earlier stages of Mercantilist thought the predilection for money-wealth was particularly dominant. The natural outcome of this emphasis was, as has already been indicated, what is now called the bullionist doctrine of foreign trade. Gerard Malynes, writing in England in 1622, well exemplified this position. Regarding money as of overweening importance in a nation's economy, he held that loss of bullion was ruinous to a country's trade and its retention desirable at all costs, even to the extent of the direct prohibition of the export of specie. Nonetheless, in that he saw clearly that an unfavorable trade balance required the shipment of specie, he did recognise a connection between the flow of specie and the balance of trade. He made no use of this, however, in his recommendations as to policy. Bullionists generally concentrated upon the retention of specie within a country's borders.

From the bullionist position Mercantilist thought advanced to the more familiar balance-of-trade view. Writers of this school perceived clearly that exports and imports of bullion depended chiefly on the state of the balance of trade: an export balance of merchandise trade would lead to an inflow of specie, while an excess of merchandise imports would cause an outflow. Accordingly they urged the vigorous pursuit of foreign trade as a means to national wealth and prosperity. On the ground that they embodied a greater amount of value, the export of manufactured goods was preferred to that of raw materials.

This emphasis upon manufacturing for export had interesting consequences in other branches of economic thought: it led to the advocacy of a large population to furnish an adequate labor supply, and to the view that low wages were desirable as permitting a nation to compete successfully in international markets. The balance-of-trade position was represented, among innumerable other writers, by the Italian Antonio Serra (1613), and by the Englishman, Thomas Mun,

whose *England's Treasure by Foreign Trade* appeared in 1664. Sir William Petty, another English Mercantilist of the second half of the seventeenth century, also espoused this view, contributing to it a recognition of the existence of "invisible items" such as freight charges.

Three authors, Dudley North, John Locke, and Samuel Clement, writing in the last decade of the seventeenth century, made significant contributions to the growth of Mercantilist views on foreign trade. North perceived clearly that the supply of money adjusts itself automatically between nations according to the needs of trade. It is worth while to quote from his Discourse of Trade: "There is required for carrying on the trade of the nation, a determinate sum of specific money which varies, and is sometimes more, sometimes less, as the circumstances require. . . . This ebbing and flowing of money supplies and accommodates itself, without any aid of politicians . . . the buckets work alternately; when money is scarce, bullion is coined; when bullion is scarce, money is melted down." He went on to condemn prohibitions on the export of specie as self-defeating, in that they make men unwilling to import it. North did not, however, take the further step of linking his theory of the automatic flow of specie between countries with commodity price changes. This step was taken by Locke, who enunciated a clear-cut quantity theory of money which attributed the value of money to the relative plenty or scarcity of money and of goods.

Locke made a further advance in the field of international price relationships: he declared that prices in different countries must be equal or close together, else a country with low prices would do a large volume of business, while a country with high prices would suffer from much idle industry. Yet he did not take the next logical step forward to show how such a situation would undergo automatic correction by means of the international flow of specie with its subsequent effect upon prices in the two countries. Because of this failure to make the most of his quantity theory of money, Locke reverted

in the field of practical policy to a position of extreme Mercantilism.

Clement, the latest of these three writers, added to Mercantilist thought a clear statement of the essentials of the specie-point mechanism. Recognising the usefulness of bills of exchange as dispensing with shipments of bullion, he indicated how fluctuations in the rate of exchange are confined within a range about mint par determined by the costs of exporting or importing bullion.

The seventeenth century was thus a period of the growth and refinement of Mercantilist thought. At its close the works then in print contained scattered elements of an explanation of international price relationships. These elements were: a quantity theory of money; a recognition that there was some relationship between price levels in different countries; an understanding of the connection between specie flows and the balance of trade, of the automatic world distribution of the precious metals, and of the limitations set on exchange fluctuations by the specie points. It is important to bear in mind that no one author grasped all these points — they were scattered throughout the literature of the time. Nor did an understanding of the quantity theory of money prevent a writer (strikingly in the case of Locke) from being a rabid Mercantilist in the field of practical policy. But the component parts of a rather complete theory were ready to hand, awaiting unification by a penetrating mind.

DAVID HUME

This great task of synthesis was performed nearly fifty years later (1741) by David Hume. In his hands, the scattered elements of a theory of international price relationships were welded into a unified whole. So satisfactory was his work that it not only wrecked completely the logical foundations of the Mercantilist balance-of-trade theory, but also formed the core of the doctrines of the nineteenth century classical writers. Beginning with the crucial principle, the quantity theory of

money, Hume expanded this doctrine to fit all nations, thereby destroying at one blow the validity of the balance-of-trade theory. The short, brilliant passage in which he does this is well worth quoting:

Suppose four fifths of all the money in Great Britain to be annihilated in one night . . . what would be the consequence? Must not the price of all labour and commodities sink in proportion . . . ? What nation could then dispute with us in any foreign market, or pretend to navigate or to sell manufactures at the same price, which to us would afford sufficient profit?

In how little time, therefore, must this bring back the money which we had lost and raise us to the level of all the neighboring nations? Where, after we have arrived, we immediately lose the advantage of the cheapness of labour and commodities; and the farther flowing in of money is stopped by our fullness and repletion.¹

Here we have recognition of the causes of specie movements coupled with the quantity theory of money to form the now well-known price-specie flow analysis. Prices in any one country are determined by the quantity of money; prices in different countries are interdependent — a low price country can undersell a high price country; such underselling will lead to a flow of specie to the low price country, raising prices there and lowering them in the other country. Equilibrium is finally reached with some common relationship between national price levels. To this analysis Hume added the doctrine that ordinarily money is distributed among countries in a manner "nearly proportionable to the art and industry of each nation," as well as the less important observation that exchange rate changes (within the specie points) affect imports and exports through their effects on prices.

During the remainder of the eighteenth century, little advance was made upon Hume's theoretical analysis. It is true Sir James Steuart came close to formulating the principle of reciprocal demand, fully developed only some seventy-five years later by Mill; yet his chief work, the *Principles of Political Economy* (1767), though studded with brilliant suggestions,

¹ David Hume, *Essay of the Balance of Trade*, p. 300.

represented on the whole a thoroughly Mercantilist point of view. Even Adam Smith, whose epoch-making work, *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776), gave a new orientation to the study of political economy, added to Hume's formulation only a clear expression of the advantages of international specialisation.¹ Although *The Wealth of Nations* gained no new ground for the theory of our subject, it so consolidated the territory already conquered and so changed the whole approach of economic thought that it demands at least brief consideration.

ADAM SMITH

Adam Smith has often been called the father of economic science. This is clearly not true in the sense that he was the first to enunciate valid principles of the subject, nor is it any more true that he was the first to write a broad, comprehensive treatise on political economy. Yet it may be justly argued that he deserves the name, for he performed the essential task of unifying, expanding, and enlivening the field, of presenting the materials in a manner so convincing and so interesting that public understanding was tremendously increased. *The Wealth of Nations* became the veritable textbook of statesmen for many years after its publication. Furthermore, not only did he demolish, with cogent argument and apt illustration, the entire structure of the Mercantile system, but also he constructed to take its place an economic philosophy which became the creed of future statesmen and economists, a philosophy which has only in recent years become the object of general attack.

¹ Indeed, with respect to the self-regulating mechanism of international trade, Smith's account is definitely inferior to that given by Hume. "One of the mysteries of the history of economic thought is that Adam Smith, although he was intimately acquainted with Hume and with his writings, should have made no reference in the *Wealth of Nations* to the self-regulating mechanism in terms of price levels and trade balances, and should have been content with an exposition of the international distribution of specie in the already obsolete terms of the requirement by each country, without specific reference to its relative price level, of a definite amount of money to circulate trade." Viner, *op. cit.*, p. 87. Little attention, as a matter of fact, was accorded Hume's contribution until the early part of the 19th century.

On the destructive side, Smith used the theoretical foundations laid down by Hume as the base for a broad and devastating attack upon both the philosophy and policies of Mercantilism. The identification of wealth with money, the doctrine of a favorable balance of trade, restraints upon imports and bounties upon exports — all were dealt smashing blows. And his attack was merciless; not content with a logical exposure of fallacious reasoning, he proceeded to heap ridicule and sarcasm upon his opponents. The following passage, dealing with the predilection for the precious metals, is illustrative of his method.

It is not for its own sake that men desire money, but for the sake of what they can purchase with it. Consumable commodities, it is said, are soon destroyed; whereas gold and silver are of a more durable nature, and, were it not for this continual exportation, might be accumulated for ages to the incredible augmentation of the real wealth of the country. Nothing, therefore, it is pretended, can be more disadvantageous which consists in the exchange of such lasting for such perishable commodities. We do not, however, reckon that trade disadvantageous which consists in the exchange of the hardware of England for the wines of France; and yet hardware is a very durable commodity, and were it not for this continual exportation might, too, be accumulated for ages together, to the incredible augmentation of the pots and pans of the country.¹

To this brilliant work of destruction, and to his rather unsatisfactory reformulation of the doctrines covering the relations between prices, specie flows, and trade movements, Adam Smith added a discussion of the underlying basis for foreign commerce, the advantages derived from the international division of labor. This principle is a logical expansion of his famous and elaborate presentation of the benefits of the division of labor. It is vividly expressed in this well-known passage:

The natural advantages which one country has over another in producing particular commodities are sometimes so great that it is acknowledged by all the world to be in vain to struggle

¹ Adam Smith, *The Wealth of Nations*, p. 385. (Everyman's Edition.)

with them. By means of glasses, hotbeds, and hot walls, very good grapes can be raised in Scotland, and very good wine too can be made of them at about thirty times the expense for which at least equally good can be brought from foreign countries. Would it be a reasonable law to prohibit the importation of all foreign wines merely to encourage the making of claret and burgundy in Scotland? But if there would be a manifest absurdity in turning towards any employment thirty times more of the capital and industry of the country than would be necessary to purchase from foreign countries an equal quantity of the commodities wanted, there must be an absurdity, though not altogether so glaring, yet exactly of the same kind, in turning towards any such employment a thirtieth, or even a three-hundredth part more of either. Whether the advantages which one country has over another be natural or acquired is in this respect of no consequence. As long as the one country has those advantages, and the other wants them, it will always be more advantageous for the latter rather to buy of the former than to make. It is an acquired advantage only, which one artificer has over his neighbor, who exercises another trade; and yet they both find it more advantageous to buy of one another than to make what does not belong to their particular trades.¹

It has been indicated earlier in this chapter that Mercantilism was far more than a narrow set of precepts relating to foreign commerce; that, on the contrary, it was a broad economic and political philosophy aiming at the welfare of the state, issuing, in the field of practical policy, in manifold governmental regulations of industry and trade. Now Adam Smith did far more than attack and destroy the validity of particular mercantilist measures; he substituted for the view that national welfare requires the continuous active intervention of government the fundamentally opposed philosophy of individualism, of *laissez-faire*. Here, again, his own words are worth repeating:

As every individual endeavors as much as he can both to employ his capital in the support of domestic industry, and so to direct that industry that its produce may be of the greatest value; every individual necessarily labours to render the annual revenue of the society as great as he can. He generally, indeed,

¹ Adam Smith, *The Wealth of Nations*, p. 402.

neither intends to promote the public interest, nor knows how much he is promoting it. By preferring the support of domestic to that of foreign industry, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for the society that it was no part of it. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it. I have never known much good done by those who affected to trade for the public good. It is an affectation, indeed, not very common among merchants, and very few words need be employed in dissuading them from it.¹

In this and in numerous other passages, Adam Smith set forth the essentials of the economics of individualism. No longer is the state regarded as something above and beyond its individual citizens with interests and objectives independent of and more important than theirs. Instead, government is relegated to the position of an umpire, providing a framework of law and order and enforcing the rules of the economic game, while the individual and his welfare assume the center of the stage. Self-interest is to provide the drive, natural liberty (in the economic sphere, its name is competition) the means whereby the new desideratum, individual welfare, is to be attained. At the hands of Bentham and John Stuart Mill, individual welfare was translated into "the greatest happiness of the greatest number," and this goal was in turn later subjected to criticism. Throughout the nineteenth century, however, self-interest and freedom, or free private enterprise and competition, continued to be generally regarded as the proper means of realising the individual's desires.

So complete a change in viewpoint must be regarded as no less than revolutionary. Entire credit for producing such a vast change can by no means be given to Adam Smith, for this new philosophy was elaborated and expounded by numbers of writers, among whom the more important were Bentham and the Mills. Yet *The Wealth of Nations* was one of the earliest and certainly one of the most vigorous and

¹ *Ibid.*, p. 400

widely read works embodying the essentials of the new creed. Its influence was undoubtedly tremendous. The rapid spread of the doctrines of individualism cannot, however, be attributed to the effects of the written word alone. Quite as important was the fact that the new principles were suited to the underlying conditions of the age, particularly to conditions in England. The Industrial Revolution was just beginning; new inventions and techniques were being developed and applied in both industry and agriculture; transportation and communication were being rapidly improved. England's population was sharply increasing, and her foreign as well as her domestic trade was growing by leaps and bounds. Indeed, in the field of manufactured exports, she had something closely approaching a monopoly. In such an economic situation, merchants and manufacturers resented the restrictive measures of the Mercantile system. They were only too ready to embrace and put into practice principles which would guarantee them greater freedom. Little wonder, then, that at the blasts of Adam Smith and other individualist writers doctrinaire Mercantilism crumbled and collapsed.

Let us now turn from this brief but necessary digression into general economic philosophy to summarise the situation in the narrower field of international economics. David Hume had woven together into a consistent fabric the scattered threads of earlier thought to furnish a fairly complete though elementary theory of international price relationships. Money and prices in any given country were regarded as intimately connected in a rather rigorous quantity theory of money. The various national price levels were seen to be closely linked through the effects of specie flows upon the supply of money. The mechanism responsible for specie flows was discovered in the foreign exchanges, the pressure of inward or outward payments driving the rate of exchange to the specie import or export point. Finally, exchange rate fluctuations were known to be limited by the specie points, and to affect directly, to a very limited extent, commodity prices. To this price analysis, Adam Smith added nothing; in fact,

so far as he discussed it, his formulation was less clear and convincing than Hume's. He did, however, call attention to the fundamental basis on which all international trade rests — the advantages flowing from the international division of labor. No writer had as yet attempted a detailed analysis of the causes underlying international trade and governing its terms. This task awaited solution by nineteenth century writers.

• DAVID RICARDO

Throughout the nineteenth century, two men stand out in the field of international trade theory above all the rest: David Ricardo and John Stuart Mill. Many other writers, it is true, made noteworthy contributions to the subject, but these were mainly in the form of qualifications or elaborations. After Mill, the main outlines of the classical doctrines were complete. For this reason, the remainder of this chapter will be devoted largely to the work of these two men. Further additions will be but briefly mentioned, especially as their importance can be more readily brought out when we analyse the present status of the classical theory.

Both Mill and Ricardo were primarily concerned with and did most to advance the understanding of that aspect of our subject hitherto largely ignored: the causes governing the movements and exchange ratios of internationally-traded goods. Because of the Mercantilists' emphasis on gold and silver as the type of wealth most useful to the state, attention had long been focussed on the monetary factors involved in international transactions. Where, with Adam Smith, the individual replaced the nation as the arbiter of economic activity, goods useful in satisfying human wants naturally assumed the position of central importance. This shift in emphasis was responsible for the greater concern shown henceforth for the goods side of international economic relationships.

Ricardo's theory of domestic value is well known. The ratios at which goods exchange within a given country tend, in the long run, to be governed by their labor costs. More-

over, since he assumed perfect mobility of labor and capital within a country, commodities would be produced in those localities where their costs in terms of labor were lowest. To illustrate, let us suppose the labor costs of producing a given quantity of cloth and of cheese in Yorkshire and in London to be as follows:

	<i>Cloth</i>	<i>Cheese</i>
Yorkshire	90 days	80 days
London	100 days	120 days

Under these conditions, with no restrictions on the flow of labor and capital, both commodities would be produced in Yorkshire, and the ratio of exchange would be 1 unit of cloth for $1\frac{1}{2}$ units of cheese. London would then be left to produce something in which her labor costs were absolutely lower than those of Yorkshire, say hardware at 60 days labor as compared with 80 days for Yorkshire. London hardware would then be exchanged for Yorkshire cloth or cheese at the rate of $1\frac{1}{2}$ hardware for 1 cloth or $1\frac{1}{2}$ cheese.

When Ricardo came to consider trade between different countries, rather than between different parts of the same country, he decided that a totally dissimilar situation existed.

The same rule which regulates the relative value of commodities in one country, does not regulate the relative value of the commodities exchanged between two or more countries. . . . The quantity of wine which she (Portugal) shall give in exchange for the cloth of England, is not determined by the respective quantities of labour devoted to the production of each, as it would be, if both commodities were manufactured in England, or both in Portugal.¹

The reason is simple.

The difference in this respect, between a single country and many, is easily accounted for, by considering the difficulty with which capital moves from one country to another, to seek a more profitable employment, and the activity with which it invariably passes from one province to another in the same country.²

¹ Ricardo, *Principles of Political Economy and Taxation*, Gonner Edition, 1919, pp. 113, 115.

² *Ibid.*, p. 116. Ricardo elsewhere (p. 114) mentions the immobility of labor, or "population."

Using figures identical with those above, but applied instead to separate countries:

	<i>Cloth</i>	<i>Wine</i>
Portugal	90 days	80 days
England	100 days	120 days

it appears that it will be advantageous for the two countries to specialise, Portugal in the production of wine, England in the production of cloth. For Portugal can exchange her wine, the product of 80 days' labor, for England's cloth, thereby securing at a cost of 80 days' labor a commodity which would have cost her (Portugal) 90 days had she produced it herself. England likewise benefits from the trade, for she acquires at a cost of 100 days' labor a quantity of wine which she could only have produced in 120 days. Of course, the cloth-making population of England would be better off if it could move to Portugal, where conditions are more favorable to cloth manufacture, but the restrictions on the movement of labor and capital¹ prevent this from occurring, giving rise instead to trade between the two countries on a basis, not of labor cost, but of *comparative cost*.

While Ricardo did not attach a name to his doctrine, it has long been known as the law of comparative cost. Neither did he state it in the form of a general principle, as it is now advisable for us to do. The law of comparative cost may be expressed as follows: Whenever two countries produce commodities at relatively different (labor) costs, it will be advantageous for each country to specialise in the production of those commodities whose costs are relatively lowest. The full meaning and implications of this doctrine will become clear when we examine the modern formulation of the classical theory of international trade.

It is obvious upon reflection, as Ricardo himself made clear, that this principle is merely a derivative of the advantages of the division of labor in general.

¹ These restrictions are, "the fancied or real insecurity of capital, when not under the immediate control of its owner, together with the natural disinclination which every man has to quit the country of his birth and connections, and entrust himself, with all his habits fixed, to a strange government and new laws." *Op. cit.*, p. 117.

If of two individuals, one is of outstanding ability both as an executive and as a stenographer, while the other is a miserable executive and only a competent stenographer, it will pay the one to concentrate on executive work where his ability counts most, leaving the stenographic duties to the person who is less efficient at both tasks. Stated generally, it is advantageous for the competent to specialise on those tasks where competence makes the most difference, while the incompetent concentrate on the work where incompetence makes the least difference.

This principle, extended by Ricardo to the case of two trading nations, becomes in that field the law of comparative cost. It marks a distinct advance over the position taken by Adam Smith, who perceived only that it pays to import those products which other countries can produce at an absolutely lower labor cost, for it furnishes a basis for determining the precise conditions under which particular commodities may profitably be imported or exported. Yet the doctrine fell short of completion, for it left undetermined the actual ratios at which goods would exchange. Ricardo assumed these ratios — the product of one hundred days in cloth for eighty days in wine — without bothering to discuss them. This further step in the development of theory was taken by John Stuart Mill.

Ricardo's position with regard to the monetary aspects of international exchange is of some interest, though he did little to advance understanding in this portion of the field. As to the world distribution of the precious metals, Ricardo enunciated the doctrine that gold and silver are so allocated between the various countries that trade goes on as it would under barter conditions. That is, the ratios of exchange between internationally-traded commodities are determined by the underlying principle of comparative cost; money will flow between countries until these basic exchange ratios hold good, when equilibrium will exist.

The means by which gold movements are brought about is the familiar price specie-flow mechanism. Suppose, in the

simple England-Portugal illustration above, that the *labor* cost in England of producing wine is so lowered that the comparative cost situation becomes one where specialisation will no longer pay. England will continue for a time to ship cloth to Portugal, since the price of cloth remains unchanged. Portugal, however, will have an unfavorable balance of trade, and will be forced to ship gold to England to pay for the cloth. The price of both commodities will rise in England and fall in Portugal until the exportation of cloth from England, as well as the importation of wine from Portugal, becomes unprofitable.¹

When, on the other hand, prices in one country are unduly high, owing to an excessive supply of money (a "redundancy of the currency"), the price specie-flow apparatus again furnishes an automatic corrective, according to Ricardo, redistributing the money metals in such fashion that prices reflect the underlying comparative cost situation.² Thus price levels in various trading nations are linked.

Ricardo maintained, however, that there is no tendency to a world equality in price levels. Two factors prevent this equality from existing: the industrial position of a country, and its distance from the mines. A country with developed manufactures is likely, he held, to have high prices of domestic commodities ("home commodities and those of great bulk"), because it will presumably have a favorable balance of trade.

¹There is a unique labor cost of producing wine in England, 88.2 days, in the illustration given, which will give rise to this situation, for with any other cost there will still be relative differences in costs, which would make the continuance of trade (ignoring transport charges) profitable. Ricardo does not discuss this point, though it is implicit in his analysis.

²J. W. Angell argues (in *The Theory of International Prices*, pp. 56 and 70) that Ricardo held specie movements to be due exclusively to a redundancy of the currency, and not at all to prior disequilibria in the balance of trade. Yet a careful reading of Chapter VII of Ricardo's *Principles* seems to indicate that an altered balance-of-trade situation could be the cause, as well as the result, of gold movements. What, as a matter of fact, is involved in the wine-cloth illustration but an alteration in the balance of trade (induced by industrial changes) which leads to specie movements? It is true, however, that Ricardo contradicted this view in other writings, and in any event, the balance-of-trade view of gold movements was first clearly stated some years prior to the appearance of the *Principles* by Henry Thornton, a contemporary of Ricardo's.

and attract much gold; countries distant from the mines will have low prices of these commodities, owing to the great cost of shipping both their exports and the gold. Clearly, however, a flow of gold to a country with efficient manufactures could not continue indefinitely; it would stop when the prices of international goods corresponded to their comparative labor costs of production. Prices of such goods would then differ, in the trading countries, only by the costs of carriage, while domestic commodities might differ by any amount up to the costs of carriage. This further step, required to make his doctrine consistent, Ricardo failed to take.

JOHN STUART MILL

Mill's original contribution to the field of international economics was limited to one point: his theory of reciprocal demand. In all other respects, while he did much to advance the understanding of the subject, this advance was due to the clarity and unity with which he endowed it by elaborating, reformulating, and combining the scattered strands of thought to be found in Hume, Smith, Ricardo, and other writers.

Mill restated in a clearer and more general form Ricardo's principle of comparative cost. He also made unmistakably clear the nature of the advantages to be derived from international trade. The chief of these are, he pointed out, that countries are enabled either to secure commodities they could not produce at all, or to secure goods they could produce only at a higher real cost. In this connection, he furnished an incomparable refutation of the view that even today lingers on, that the benefits of foreign commerce are somehow to be found in the market it provides for a country's exports. His words will bear repetition:

An extended market for its produce — an abundant consumption for its goods — a vent for its surplus — are the phrases by which it has been customary to designate the uses and recommendations of commerce with foreign countries. This notion is intelligible, when we consider that the authors and leaders of opinion on mercantile questions have always hitherto been the

selling class. It is in truth a surviving relic of the Mercantile theory. . . . The notion that money alone is wealth has been long defunct, but it has left many of its progeny behind it; and even its destroyer, Adam Smith, retained some opinions which it is impossible to trace to any other origin. Adam Smith's theory of the benefit of foreign trade was that it afforded an outlet for the surplus produce of a country, and enabled a portion of the capital of the country to replace itself with a profit. These expressions suggest ideas inconsistent with a clear conception of the phenomena. The expression surplus produce, seems to imply that a country is under some kind of necessity of producing the corn or cloth which it exports; so that the portion which it does not itself consume, if not wanted and consumed elsewhere, would either be produced in sheer waste, or, if it were not produced, the corresponding portion of capital would remain idle, and the mass of productions in the country would be diminished by so much. Either of these suppositions would be entirely erroneous. The country produces an exportable article in excess of its own wants from no inherent necessity, but as the cheapest mode of supplying itself with other things. If prevented from exporting this surplus, it would cease to produce it, and would no longer import anything, being unable to give an equivalent; but the labour and capital which had been employed in producing with a view to exportation, would find employment in producing those desirable objects which were previously brought from abroad; or, if some of them could not be produced, in producing substitutes for them.¹

The law of comparative cost, it will be remembered, furnished a basis for determining what commodities might profitably be traded; yet it left indeterminate the ratios at which these commodities would be exchanged. To remedy this shortcoming, Mill formulated his doctrine of reciprocal demand, or, as he called it, the "Equation of International Demand." Using a numerical illustration similar to Ricardo's,² he,

¹ John Stuart Mill, *Principles of Political Economy*, Ashley edition, pp. 579-580.

² Ricardo took as a constant the quantity of the commodities produced in each of the two countries, using as a variable the cost in days of labor. Thus his formulation runs in terms of comparative cost. Mill, however, takes as a constant the labor cost, using as a variable the respective outputs of the two commodities in the two countries. Thus his formulation runs in terms of comparative advantage, or comparative effectiveness of labor. It is possible that because this method of stating the problem forcibly calls one's attention to the possible range of barter terms of trade, the concept of reciprocal demand suggested itself to Mill.

assumed that with a given quantity of labor the output of goods in two countries might be as follows:

	<i>Broadcloth</i>	<i>Linen</i>
England . . .	10	15
Germany . . .	10	20

Here the comparative advantage situation is one of superiority for Germany in the production of linen, one of equality and hence of comparatively smaller disadvantage for England in the production of broadcloth. If no trade takes place between the two nations, 10 units of broadcloth will exchange in England for 15 of linen, in Germany for 20. Clearly, however, trade will be profitable for England if for 10 units of broadcloth she can secure anything more than 15 of linen, and for Germany if 10 of broadcloth can be secured for anything less than 20 of linen. The limits to the possible ratios of exchange are set by the comparative advantage situation; within these limits, any single ratio may obtain. The question Mill sought to answer was: what factors determine the actual rate at which the commodities will exchange?

Mill begins his attack on the problem by assuming that the ratio is 10 of cloth for 17 of linen. This ratio will be a stable one only provided England's requirements for linen and Germany's for cloth are of such a size that the exports of the two commodities will just pay for one another. This condition will be satisfied when each country's requirements reach a common multiple of the terms of trade: for example, when England will take $1000 \times 17 = 17,000$ units of linen and Germany $1000 \times 10 = 10,000$ units of cloth. But suppose, at a ratio of 10 to 17, England wants only 800×17 units. Then at that price or ratio, Germany can obtain only 800×10 units of cloth. To obtain the additional 2000 of cloth which she still presumably wants, she will have to offer more favorable terms of trade, say 18 linen for 10 cloth. At that ratio, England might take 900×18 linen, while Germany's demand, at what now amounts to a higher price, might shrink to 900×10 cloth, at which point shipments of the two commodities would again just pay for one another. On the

other hand, had Germany's demand for cloth been less intense, a similar multiple might have been reached at a ratio of 10 to 16!

On the grounds of this reasoning, Mill concludes that within the limits set by comparative cost conditions, the actual ratio at which goods are traded will depend upon the strength and elasticity of each country's demand for the other country's product. In Mill's words:

It may be considered, therefore, as established, that when two countries trade together in two commodities, the exchange value of these commodities relatively to each other will adjust itself to the inclinations and circumstances of the consumers on both sides, in such manner that the quantities required by each country, of the articles which it imports from its neighbour, shall be exactly sufficient to pay for one another.¹

A further corollary is to be drawn from this Equation of International Demand. Since the cost of a country's imports is the goods it exports to pay for them, that country will benefit most from international trade for whose products the demand is most intense and elastic, and whose demand for imports is least intense and elastic. In the above illustration, the ratio of 10 to 18 was favorable to England, and resulted from the fact that at 10 to 17, England's demand was slack, while Germany's was intense.

Mill next proceeds to examine the effects of introducing costs of carriage, more than two commodities, and more than two countries. He finds that these changes make no essential difference to his principle, which he restates in the following broader form:

The produce of a country exchanges for the produce of other countries, at such values as are required in order that the whole of her exports may exactly pay for the whole of her imports. This law of International Values is but an extension of the more general law of Value, which we called the Equation of Supply and Demand . . . supply and demand are but another expression for reciprocal demand; and to say that value will adjust itself so as to equalise demand with supply, is in fact to say that it

¹ *Op. cit.*, p. 587.

will adjust itself so as to equalise the demand on one side with the demand on the other.¹

In this form, Mill's principle has become known as the law of reciprocal demand.

It was not long before critics pointed out that more than one rate might satisfy the conditions of the Equation, and that hence the determination of the ratios of exchange was still inexact. Mill's attempt to meet these critics was unconvincing. His doctrine, however, contains an important element of truth whose exact position in the general theory of international trade can best be assayed later.

With regard to the monetary aspects of international relations, Mill's contributions were not of sufficient importance to warrant examination here. Let it suffice to say that he accepted a modified quantity theory of money, the price specie-flow mechanism of Ricardo and Thornton, a doctrine of the world distribution of the precious metals similar to Ricardo's, and that his position on national price level relationships was rather indecisive.

FURTHER REFINEMENTS

The main lines of the theory of international trade as laid down by Ricardo and Mill continue to represent the teaching of orthodox or "classical" economists. From time to time, however, additional refinements were introduced, the more important of which we may now briefly consider.

Writing somewhat earlier than Mill (in 1830) Nassau Senior made a definite advance toward the understanding of the factors ruling the relative levels of money incomes and prices in different countries. His views may be summarised as follows. First, wages in a country's export industries depend upon the productive efficiency of its labor, relative to that of other countries. The more efficient are the producers of exports, the higher will their money wages be.²

¹ *Op. cit.*, pp. 592-593.

² "The diligence and skill with which English labour is applied enables the English labourer to produce in a year exportable commodities equal in value

Second, the height of wages in domestic industries will, under the force of competition, be brought to the same height as wages in the export industries. Domestic commodity prices will then be high or low according as the labor in the domestic industries is less or more efficient than labor in the export industries, comparison in both cases being made with foreign countries as a standard.

Some twenty-five years after the first appearance of Mill's *Principles*,¹ J. E. Cairnes made further significant additions to the analysis of international trade. Both Ricardo and Mill had established an insurmountable gulf between values in internal and values in international trade. With regard to internal values, Ricardo held these were governed by labor cost, while Mill took a similar but qualified and much less consistent position. Both agreed, however, that international values bore no relation to cost of production. Cairnes was able to bring the two theories of value into a clear relationship with one another. Where perfect competition between labor and capital exist, he says, commodities will exchange in proportion to their human costs (in labor and abstinence) of production. Where, on the other hand, such competition does not exist, or in other words, in trade between non-competing groups, the principle of cost of production does not apply. In such trade, exchange value depends solely upon the relative strength of each group's demand for the other group's product — that is, upon reciprocal demand. Now trading nations are similar to non-competing groups within a country; consequently the exchange values of the goods they trade will be determined by principles identical with those applying to trade between domestic, non-competing groups. Thus there is no sharp break in the treatment of domestic and international values; the theory applying to *some* types of domestic trade applies likewise to all foreign trade.

to those produced in a year by eight Hindoos." Nassau Senior, *On the Cost of Obtaining Money*, London, 1830.

¹ The first edition of Mill's *Principles of Political Economy* appeared in 1848; Cairnes' *Some Leading Principles of Political Economy* was published in 1874.

Cairnes was also the first to provide an adequate discussion of the place and importance of the "invisible items" in international transactions. He was enabled thereby to make his treatment far more realistic. Worthy of note in this connection is his reformulation of the "Equation of International Demand," according to which equilibrium between trading countries results, not when imports and exports just balance, but when there is "such a relation of imports and exports among them as enables each country by means of her exports to discharge all her foreign liabilities."¹

Cairnes' concern with invisible items, in particular with international financial transactions, led him to develop the now well-known analysis of the stages of borrowing operations. He distinguishes three such stages: (1) an initial one at the beginning of lending, when the lending country after an initial loss of gold will pay the loan in goods, thereby establishing an export balance of trade; (2) an intermediate stage, when interest payments from the borrowing country gradually offset continuing capital exports and counteract their effects; (3) a final stage, when interest payments by the borrower exceed new loans; the lending country will then have an import balance of trade.

Writing at about the same time as Cairnes, Alfred Marshall extended in a generalised form the theory of reciprocal demand. Mill's statement of this theory applied only to a single export and a single import. At any given time, however, the trade of any country consists of many individual commodities in each category. By expressing the exports of each of two trading countries in terms of "representative bales of goods," Marshall was able to give a complete although somewhat arbitrary picture of the results of the whole trading process.²

Decidedly in the nature of expansion and elaboration of the

¹ *Op. cit.*, p. 357.

² An excellent brief résumé of Marshall's analysis is given in Haberler, *The Theory of International Trade*, pp. 150-159. Marshall's own statement is to be found in his *Money Credit and Commerce*, Chapters VI, VII, and VIII, and Appendix J.

classical doctrine were the contributions of C. F. Bastable, writing at the close of the nineteenth century. We can merely mention the results of his work here, reserving fuller discussion for the next chapter, when a complete statement of the modern neo-classical position will be undertaken. Ricardo and Mill had tacitly assumed conditions of constant cost in their analysis; Bastable, by introducing into the discussion the possibilities of increasing and decreasing returns, rounded out and made more complete this aspect of the theory. He also examined the qualifications necessitated by the introduction of varying elasticity of demand, which Mill had mentioned but not discussed. (Mill called it "extensibility of demand" rather than elasticity.) By introducing these factors, Bastable served to make the received doctrines more complex but at the same time more adequate.¹

An attempt at greater realism in the treatment of international trade phenomena was made by J. S. Nicholson, a contemporary of Bastable's. Nicholson dispensed with the whole barter approach, stating the problem of international values at the very outset in terms of prices and money wages. Though he was led into inconsistency and obscurity by the complexities of price relationships, his viewpoint was novel and suggestive, and may be regarded as a forerunner of a very recent and much more thorough and consistent attack along similar lines.

Our historical study of the development of the classical theory of international trade may fittingly be brought to a conclusion with the work of Professor F. W. Taussig. His latest volume in the field,² represents a great task of synthesis, for in it he has brought together all the various strands of thought scattered among the writings of over a century, added significant threads of his own development, and woven the whole into a consistent fabric. Though in most respects he follows the earlier classical writers, Taussig nonetheless so

¹ Bastable's original attempt to include under the heading of cost other elements than labor we shall reserve for discussion in Chapter III.

² F. W. Taussig, *International Trade*, New York, 1928.

amplifies and clarifies many points first advanced by his predecessors that both the doctrines and their relationships stand out with a precision not hitherto attained. This is especially conspicuous in his statement of Senior's briefly phrased thesis regarding national levels of prices and money wages, wherein the causal relationships existing between the strength of foreign demand for a country's exports, the relative effectiveness of labor in the export industries, and the national level of money incomes and prices are clearly and explicitly portrayed.

Taussig's original contributions, aside from the major task of synthesis, consist mainly in his analysis of the benefit from international trade, in his full discussion of the part played by non-competing groups, and in his introduction of capital charges into the cost situation. Fuller treatment of these points will be undertaken in the following chapter.

CHAPTER III

THE MODERN CLASSICAL POSITION

IN the preceding chapter, the slow development of a theoretical explanation of the forces underlying and determining the movement of goods in international trade has been traced. The parallel course of a theory of the monetary relationships involved has likewise been followed. Such an historical study was considered worth while, partly because of the inherent interest it possesses, and partly because of the way in which it lays bare the roots of modern thought. Throughout the nineteenth century, and until very recent years, the explanation of the classical economists and their followers was the only consistently worked-out theory extant. It still remains, with modern elaborations and qualifications, the analysis most widely accepted even among specialists in international economics. The past and present importance of the classical doctrines, therefore, warrant both a review of their growth and a full statement of their current formulation. To this latter task we must now turn.¹

A clearer understanding of our subject will result if we first examine the aims and purposes of the theory of international trade. Three main objectives are to be distinguished. (1) The first of these is an explanation of the forces determining what kinds of goods will be traded internationally. An answer is sought to the question: what specific conditions determine the particular commodities moving between countries? (2) A second problem follows logically and immediately: having discovered the fundamental bases on

¹ In this chapter, the writer has drawn heavily upon Taussig's *International Trade*, as being both the most precise and the most thorough statement of the neo-classical position.

which goods movements rest, what factors govern the terms of international exchange of these goods, in a settled equilibrium situation? (3) Finally, still a third problem emerges: suppose equilibrium in international trade is disturbed, by what means is a new position of equilibrium reached? In other words, what is the mechanism of adjustment to disturbances of international equilibrium?

In the foregoing historical study, the assumptions of the various writers have only incidentally been brought to light. It is now essential, however, to state clearly the postulates upon which the theory rests. Only if this is done is it possible to appreciate the significance of the qualifications introduced or to judge the validity of the criticisms directed against the classical structure.

Every scientific investigation must begin with assumptions, as the foundation stones on which the investigation rests. These assumptions may be as unreal or abstract as one pleases to make them. It is important to realise, however, that the conclusions reared upon them are applicable without alteration only to the imaginary kind of world one has arbitrarily created. If it is desired to apply a theory based upon and erected by means of abstract assumptions to the real world, a process of qualification and relaxation of those original assumptions is essential. They must be regarded as merely provisional, later to be supplemented or supplanted by more realistic postulates. In this case, they perform the same function as the scaffolding of a building, which is discarded when the structure is complete. Abstract assumptions are ordinarily employed where, as in economic studies, the situation to be analysed is highly complex. This makes it possible to proceed, step by step, from simple, easily understood beginnings to all the complexities of reality by a process of gradual relaxation and qualification of the first extremely simple and rigid assumptions. This method was the one adopted by the classical writers on international trade; it still characterises the modern formulation of their theories. Consequently it will be noted that many of the assumptions

presently to be stated are by no means in accord with the facts. This need not concern us, if the proper qualifications are later introduced, bringing the theory into relation with reality. Whether the qualifications themselves are adequate is another question, which will occupy our attention from time to time, especially in the following chapter.

The assumptions with which we will begin our theoretical exposition are as follows: (1) costs are regarded as consisting of labor cost alone, to be expressed in terms of so many days of labor; (2) production is considered as taking place under conditions of constant cost — variations in output are presumed to have no effect upon unit cost; (3) perfect mobility of the factors of production is assumed to exist within a country, and (4) complete immobility of the factors internationally; (5) gold, and gold alone, is the money of all countries; (6) the validity of the quantity theory of money is accepted; (7) trade in goods alone is considered, invisible items such as capital movements being ignored; (8) transportation charges are ignored; and (9) trade is supposed to be free from all arbitrary restraints. Furthermore, (10) only two countries and (11) two commodities at a time are to be considered, and finally, (12) disturbances from such sources as the business cycle are presumed not to exist, that is, the economic order is assumed to tend constantly toward a condition of stable equilibrium.¹

With these assumptions in mind, let us proceed in search of a systematic answer to the first of our problems: namely, what forces determine the specific goods traded between countries? If labor costs alone are reckoned, and if the factors of production are perfectly mobile within a country, then clearly in domestic trade commodities will exchange at ratios determined by labor costs of production, while into this trade will enter any commodity for which there exists an effective demand. To use a simple illustration, suppose that in Ohio ten days of labor will produce 20 tires or 10 bolts of

¹ It is to be noted that these assumptions are the initial ones used explicitly or implicitly by both Ricardo and Mill, and by most of their successors as well.

cloth, while in the adjacent state of Pennsylvania, the same amount of labor will produce 10 tires or 20 bolts of cloth. In Ohio, workers will specialise in the production of tires, in Pennsylvania in the production of cloth, and the ratio of exchange will be 20 tires for 20 cloth. If Ohio labor succeeded in exacting a more favorable ratio, say 10 tires for 20 cloth, laborers would migrate from Pennsylvania to Ohio, where real wages (in terms of both tires and cloth) were higher. This would go on until the output of tires was so increased that exchange between the two commodities took place on a basis of labor cost, when the return to labor would be equal in both districts.

If, however, labor cannot move freely between regions (such as separate countries) in which costs of production differ, the rewards of labor may be widely divergent, and exchange ratios may vary considerably from those which would be set by labor costs. If costs of production in different countries were identical, on the other hand, no basis for international trade would exist. Differences in costs of production furnish the basis for international trade; comparative immobility of labor (and of other factors as well) between countries results in a disparity of rewards and in a divorce of international values from cost of production. Given cost differences, the lack of free movement between countries gives rise to characteristics of international trade so prominent that the whole subject seems to require a separate approach.

ABSOLUTE DIFFERENCES IN COST

Three cases of differences in cost may be distinguished: absolute differences, equal differences, and comparative differences. Let us proceed to analyse the first of these.

Absolute differences in cost may be said to exist when, in the production of two or more commodities, *each* of two countries has absolutely lower costs in the production of one or more of these commodities. A simple illustration will serve to make this clear. Confining our attention to two countries,

and considering their production limited to two commodities, the following situation¹ may be presumed to exist:

	Total Cost	Output	
		Wheat	Coffee
United States . . .	10 days	20	10
Brazil	10 days	10	20

Here the United States clearly has absolutely lower costs (or an absolute advantage) in the production of wheat, Brazil in the production of coffee. If the two countries are cut off from one another, each will produce both commodities, and in the United States, 20 wheat will exchange for 10 coffee, in Brazil, 10 wheat for 20 coffee. Let trade between the two be opened up, and obviously the United States will specialise in the production of wheat, Brazil in the production of coffee. The United States will benefit if she can secure 10 coffee for anything less than 20 wheat, Brazil if she can for 10 coffee secure anything more than 5 wheat. The "barter terms of trade" (ignoring fractions) range anywhere from 10 coffee for 6 wheat to 10 coffee for 19 wheat. The former ratio will be very much to the advantage of the United States, the latter to the advantage of Brazil.

What the exact exchange ratio will be is as yet indeterminate, but at this point, certain definite conclusions stand out. A condition of absolute differences in cost makes international trade profitable; each country will specialise in the production of that commodity in which its costs are lowest (or its advantage greatest); the outside limits to the possible terms of trade are set by the cost ratios in each country.

Let us now introduce the use of money. If we assume that wages in the United States are \$3.00 a day and in Brazil \$2.00 a day, the following situation results:

¹ This and the following examples are not, strictly speaking, illustrations of comparative cost, but of comparative advantage, since total costs are assumed identical, the variations being in the output. This makes no essential difference, however, since with a given total cost, a large output indicates low unit cost, a small output high unit cost

					<i>Wheat</i>		<i>Coffee</i>	
	<i>Labor</i>	<i>Daily</i>	<i>Total</i>	<i>Output</i>	<i>Unit</i>	<i>Output</i>	<i>Unit</i>	<i>Cost</i>
	<i>Cost</i>	<i>Wages</i>	<i>Wages</i>		<i>Cost</i>			
U. S. . .	10	\$3.00	\$30.00	20	\$1.50	10	\$3.00	
Brazil . .	10	\$2.00	\$20.00	10	\$2.00	20	\$1.00	

Even with higher wages, the United States has a sufficient advantage in the production of wheat to enable her to turn it out at a lower cost than Brazil. As in the barter illustration, American wheat will be exchanged for Brazilian coffee; but since we now have a determinate money cost for the two articles, a definite exchange ratio emerges. It will be 10 coffee for $6\frac{2}{3}$ wheat, as 10 coffee cost \$10.00, and this sum of money spent on wheat will purchase just $6\frac{2}{3}$ units.

Suppose, on the other hand, that the wage situation were reversed — that wages were higher in Brazil and lower in the United States:

					<i>Wheat</i>		<i>Coffee</i>	
	<i>Labor</i>	<i>Daily</i>	<i>Total</i>	<i>Output</i>	<i>Unit</i>	<i>Output</i>	<i>Unit</i>	<i>Cost</i>
	<i>Cost</i>	<i>Wages</i>	<i>Wages</i>		<i>Cost</i>			
U. S. . .	10	\$2.00	\$20.00	20	\$1.00	10	\$2.00	
Brazil . .	20	\$3.00	\$30.00	10	\$3.00	20	\$1.50	

Specialisation and trade continue as before, though the barter terms of trade will differ. These will now be 10 of coffee for 15 wheat. Just as the first situation was to the advantage of the United States, who acquired her coffee cheaply in terms of wheat, so now it is to the advantage of Brazil, who acquires more than twice as much wheat for the same amount of coffee. The advantage clearly goes to the country with the higher level of money wages, owing to the fact that while its inhabitants have larger money incomes, they pay no more for their purchases than people of the poorer country. Furthermore, it appears that under conditions of absolute differences in cost, either country may have the higher level of money incomes. What it is that determines which country's incomes *will* be higher we shall consider later; here the relative figures are merely assumed.

There must be some limit to the divergence of income levels. Let us examine the possibilities. Assume that wages are \$4.00

a day in the United States and \$2.00 a day in Brazil. With the same labor costs as before, we get the following results:

Labor Cost	Daily Wages	Total Wages	Wheat		Coffee	
			Output	Unit Cost	Output	Unit Cost
U. S. . . 10	\$4.00	\$40.00	20	\$2.00	10	\$4.00
Brazil . . 10	\$2.00	\$20.00	10	\$2.00	20	\$1.00

Brazil can now produce wheat just as cheaply as the United States, and will presumably grow it for herself. She will, however, continue to sell coffee to the United States, and since the latter country has no other means of paying for these imports (if these are the only commodities traded), gold will be sent from the United States to Brazil. Prices and wages will rise in Brazil, fall in the United States, until a stable condition results, with shipments of the two commodities just paying for one another. Had we assumed wages in Brazil to be \$4.00, in the United States \$2.00, the situation would have been exactly the reverse, with coffee costing \$2.00 a unit in both countries, and gold flowing from Brazil to the United States in payment for wheat imports.

It now becomes apparent that the upper limit to any disparity in wages is set by the ratios of efficiency, or advantage in output. Wages in the United States cannot become twice as high as in Brazil, for that obliterates the superior American efficiency in wheat production, nor can wages in Brazil become twice as high as in the United States, for then her advantage in coffee growing is wiped out. If by any chance wage levels diverge by as much as or more than these limits, an unstable situation is created, which is corrected by gold flows and price changes; in other words, the price-specie-flow mechanism is called into operation.

Professor Taussig has called attention to the fact that the condition of absolute differences in cost or advantage presumably underlies a very important class of trade: that between tropical and temperate countries. Because of the extreme differences in climate, soil, or natural resources, conditions of production in these regions are widely dissimilar,

with the result that some commodities are produced at an absolutely lower labor cost in the temperate countries, others in the tropics. Of this character is such trade as that between the United States and Brazil in wheat and coffee, between the United States and Bolivia in manufactures and tin, and between France and West Africa in wines and palm oil.

EQUAL DIFFERENCES IN COST

A second set of conditions with respect to cost differences may conceivably exist when one country has lower costs in the production of all commodities, but lower in exactly the same degree throughout. As an illustration of this possibility, we may assume the following simple cost and output data:

	Labor Cost	Output	
		Tires	Cloth
U. S.	10	20	40
England	10	10	20

Here the labor cost in the United States for both commodities is one-half, the efficiency twice, that in England. In both countries, 10 tires would exchange for 20 cloth. Trade between the two could be in no way advantageous, for neither country could afford to give more than 20 cloth for 10 tires, nor more than 10 tires for 20 cloth.

Nor would the introduction of money make any permanent difference. Suppose wages in the United States were \$3.00 a day, in England \$1.00 a day. The money cost situation would then be:

	Labor Cost	Daily Wages	Total Wages	Tires		Cloth	
				Output	Unit Cost	Output	Unit Cost
U. S.	10	\$3.00	\$30.00	20	\$1.50	40	\$0.75
England	10	\$1.00	\$10.00	10	\$1.00	20	\$0.50

Money costs are lower for both commodities in England; she would consequently export both to the United States, receiving in return gold. This would go on until prices and wages had risen in England and fallen in the United States to a point where stable equilibrium resulted. Stability could clearly only exist when the ratio of wages in the two countries

was identical with the ratio of efficiency, when prices, too, would be the same. With any other wage and price relationship, one country or the other would have lower prices for both commodities, and the process of adjustment would have to continue.

COMPARATIVE DIFFERENCES IN COST

The most important type of cost differences is that in which one country has lower costs of production for all commodities, but in differing degrees for the various products.¹ Such a situation is known as one of comparative differences in cost, and may be illustrated by the following sample figures:

	<i>Labor Cost</i>	<i>Output</i>	
		<i>Tires</i>	<i>Cloth</i>
U. S. . . .	10	20	40
England . . .	10	10	30

Here the American costs are one-half as great as the British for tires, three-fourths as great for cloth. In terms of efficiency, the American advantage in tires is as 2 to 1, in cloth as 4 to 3. If the two countries are isolated, the domestic ratios of exchange for the two commodities will be: in the United States, 10 tires for 20 cloth, in England, 10 tires for 30 cloth, since these ratios embody equality of labor cost. Clearly, however, trade between the nations will be mutually profitable if the United States can secure for 10 tires more than 20 of cloth, and if England can purchase 10 tires for anything less than 30 of cloth. Conditions are suitable for trade, with the United States specialising on tires, England on cloth, and with a range of possible barter terms of trade extending (if fractions be ignored) from 10 tires for 21 cloth to 10 tires for 29 cloth. At any ratio of exchange within

¹ Strictly speaking, one country need not have absolutely lower costs for all commodities; it might have equal costs for some commodities. The requirement of comparative differences in cost would then still be fulfilled. For instance, if the United States had an output of 20 units for both tires and cloth while England could produce 10 tires or 20 cloth, the ratios of cost or effectiveness would still differ. Equality of costs thus constitutes a limit; if the ratio for one or more commodities rises above this, the situation becomes one of comparative differences in cost.

this range of possible barter terms, each country will concentrate upon the production of that commodity in which its comparative advantage is greatest or (as with England in this illustration) its comparative disadvantage is least.

Introduce now the use of money. Suppose wages in the United States are \$3.00 a day, in England \$2.00. Our illustration then takes the following expanded form:

				Tires		Cloth	
	Labor Cost	Daily Wages	Total Wages	Output	Unit Cost	Output	Unit Cost
U. S. . . .	10	\$3.00	\$30.00	20	\$1.50	40	\$0.75
England . . .	10	\$2.00	\$20.00	10	\$2.00	30	\$0.66 $\frac{2}{3}$

The barter terms of trade are now determinate: 10 tires for $22\frac{1}{2}$ cloth (10 tires sell for \$15.00, and this sum will buy $22\frac{1}{2}$ cloth). And the United States can produce tires more cheaply than England, in spite of its higher wage level, simply because the effectiveness of its labor in the production of tires more than offsets the higher wages. England, on the other hand, produces cloth more cheaply, its relative inefficiency being more than counteracted by its lower wage level.

Is there any limit to the excess of American wages over English? And in such a situation, must American wages exceed English? A moment's reflection will show that both questions must be answered affirmatively. If American wages rise to \$4.00, or double the English, the cost of tires in the United States likewise becomes \$2.00, and an unstable situation is created. England would send cloth to the United States, who would have to send gold in payment. This would continue, with wages and prices rising in England, falling in the United States, until a stable balance was attained with England's cloth exports just paying for her imports of American tires. On the other hand, had we begun with wages in the United States at \$3.00, but \$2.25 in England (corresponding with the ratio of advantage, 4 to 3), this would have resulted in a unit cost for cloth in England of \$0.75, the same as the American cost. The price specie-flow mechanism would again be called into operation,

though in the opposite direction. A generalisation now appears possible: wages must be higher in the country of superior efficiency by something more than the ratio of least advantage, but by something less than the ratio of greatest advantage.

DETERMINATION OF THE ACTUAL BARTER TERMS
OF TRADE •

In the preceding illustration, the barter terms of trade turned out to be 10 tires for $22\frac{1}{2}$ cloth. Needless to say, these terms, and the correlative wages and prices used in the example, would only continue to exist if there were no tendency for gold to flow from one country to the other, with resultant changes in wages and prices. And such stability could only obtain if England's exports of cloth were just sufficient in money value to pay for her imports of American tires. A stable situation of this kind might exist with the following (approximate) figures:

England takes 5,000,000 tires from the U. S. at \$1.50 = \$7,500,000
The U. S. takes 11,250,000 yards of cloth from England at \$0.66 $\frac{2}{3}$ = \$7,500,000

Suppose, however, that the demand of English buyers for tires increases to a point where they will take 6,000,000 at the price of \$1.50. This would require payments by England to the United States of \$9,000,000, whereas her claims upon Americans amount to but \$7,500,000. The balance of \$1,500,000 would move in the form of gold, with familiar effects upon wages and prices in the two countries. The adjustments might be something as follows:

U. S. . . .	10	Tires				Cloth	
		Labor Cost	Daily Wages	Total Wages	Output	Unit Cost	Output
England . .	10	\$1.75	\$3.25	\$32.50	20	\$1.62 $\frac{1}{2}$	40

American wages and prices are higher, English lower. With these prices, equilibrium might be reached with results similar to these:

England takes 5,021,000 tires from the U. S. at \$1.62 $\frac{1}{2}$ = \$8,160,000
The U. S. takes 14,000,000 cloth from England at \$0.58 $\frac{1}{2}$ = \$8,160,000 •

Now examine the barter terms of trade. With tires at \$1.50 and cloth at \$0.66 $\frac{2}{3}$ and demands such as to produce equilibrium at these prices, the barter terms were 10 tires for 22.5 cloth. But with a more intense English demand for tires, prices became \$1.62 $\frac{1}{2}$ and \$0.58 $\frac{1}{3}$ respectively, and with equilibrium at these prices, the barter terms are 10 tires for approximately 27.9 cloth, a situation much more favorable to the United States. A similar outcome could have been obtained had we assumed, instead of an increase in English demand, a shrinkage in American demand for cloth. The conclusion reached by Mill now becomes clear: The barter terms of trade are determined by the relative demand of each country for the other country's products; further, the terms will be more favorable the more intense is the foreign demand for one's own products, and the less intense one's own demand for foreign products. Such a favorable barter situation is indicated by relatively high money incomes and relatively high prices for the things one sells; the cause is to be found in the state of reciprocal international demands.

But relative intensity of demand does not tell the whole story. Had we assumed the elasticity of American demand as given (11,250,000 cloth at \$0.66 $\frac{2}{3}$, 14,000,000 at \$0.58 $\frac{1}{3}$), but a more *inelastic* English demand (that is, had the quantity of tires purchased declined less as price rose to \$1.62 $\frac{1}{2}$), then American purchases of cloth would not have sufficed to pay for English purchases of tires, and additional gold flows would have been necessary, with a still higher price for tires and a lower price for cloth. The final outcome would have been still more favorable to American buyers, so far as their purchases of imports (*i.e.*, barter terms of trade) were concerned. On the other hand, had a more *elastic* English demand been assumed, the more rapid shrinkage of English takings of tires as their price rose would have checked the gold flow sooner, and produced equilibrium with the price of tires somewhat below \$1.62 $\frac{1}{2}$ and the price of cloth somewhat above \$0.58 $\frac{1}{3}$. Such results would clearly give less favorable barter terms to the United States than the ones actually achieved.

Furthermore, had we assumed the elasticity of English demand as given (6,000,000 tires at \$1.50, 5,021,000 at \$1.62½), but a more inelastic American demand (a less rapid increase in cloth purchases as the price fell to \$0.58½), American takings of cloth would again not have sufficed to pay for English purchases of tires. England would have had to send us still more gold, with still higher incomes and prices in this country, still lower in England. The final barter terms of trade would again have been even more favorable to the United States. But had a more *elastic* American demand been assumed, our takings of cloth would have increased as its price fell so as to neutralise the gold flow more quickly. Equilibrium would have come about before the price of tires reached \$1.62½ and before the price of cloth fell to \$0.58½. The barter terms would have been less favorable to Americans.

Certain general but rather complex conclusions with regard to elasticity of demand now emerge. When foreign demand for one's own products is increasing, or one's own demand for foreign products decreasing, inelasticity of both foreign and domestic demand will produce more favorable barter terms for the home country. But where foreign demand for one's own products is decreasing, or one's own demand for foreign products increasing, elasticity of both foreign and domestic demand will result in more favorable barter terms for the home country. If reciprocal demand conditions are stable, and equilibrium exists, elasticities of demand do not matter; it is only when demands change that elasticities are called into play.

This concludes the classical analysis of international trade, as applied to greatly simplified conditions. To facilitate summarisation of the theory up to this point, as well as to avoid a possible misunderstanding, it will be well to introduce a word here as to the relation between absolute and comparative differences in cost. These two types of situation have, in the preceding pages, been treated as separate and distinct phenomena. They are not mutually exclusive, however, but

can perhaps best be thought of as two aspects of the same thing: namely, all international comparisons of costs in which the ratios of costs of two or more commodities differ. That absolute advantage is really only a special case of comparative advantage may easily be shown. For if each of two countries possesses an absolute advantage in the production of a given commodity, it also possesses a comparative advantage in the production of that commodity, relative to the other country. Thus comparative advantage or comparative differences in costs may be regarded as a broad category which includes both those differences in costs which are *merely* comparative (where one country possesses a superior but varying advantage in the production of all commodities) and those differences in costs which are absolute (where each country possesses a superior advantage).

As a first step in summarising that portion of the classical theory so far expounded, the doctrine of comparative cost or advantage may now be stated in the following inclusive form: Any country will specialise in the production of those commodities in which its advantage is comparatively greatest or its disadvantage least. This covers in a single statement both types of situation described separately in the foregoing pages. In this broad principle of comparative advantage is to be found the *basis* for international specialisation and trade. The *limits* to the possible barter terms of trade are determined by the range of the differences in cost or efficiency. The *actual* barter terms of trade are governed by reciprocal demand, that is, by the demand of each country for the other country's products, having regard to both the volume and the elasticity of these demands. Since the barter terms of trade may be relatively favorable or unfavorable to a country, it follows that the advantage derived from international trade is likewise decided by the state of reciprocal demand. Whatever the final results, the concrete form in which they eventuate is certain levels of money incomes and prices, a relatively high income and price level indicating favorable barter terms, and *vice versa*. Changes in demand conditions, and unstable

situations generally, are adjusted through operation of the price specie-flow mechanism, gold movements provoking price and income changes until the exports and imports of each country just balance.

THE GAINS FROM TRADE

Before advancing any farther with the theoretical analysis, it will be well to pause a moment to consider the nature of the gain from international trade, a topic on which popular writings even of the present time exhibit many misconceptions. Numerous articles appearing in our more widely read magazines show a very considerable understanding of the technicalities of foreign trade — of the foreign exchanges, of the complexities of international banking, even of the technique of production — but little enough of what it is all for.

Readers are led to believe that because their country *can* produce a commodity or a suitable substitute (for example, synthetic rubber), therefore it *should* produce it. The virtue of self-sufficiency in certain products is exalted into a worship of self-sufficiency in general, with a reckless disregard of the costs. International trade is treated as a mere casual outlet for goods of which we produce a temporary surplus, an outlet which could well be dispensed with in a better-ordered economy. No great effort of thought is needed to show that this view is based on a complete misunderstanding of the nature of trade. Exchange of goods is but a necessary corollary of the division of labor and the specialisation of tasks to particular aptitudes and resources, practices which modern productive methods embody to the *n*th degree. If we want to secure the immense benefits of specialisation, we must be willing to trade the products of one specialised group for the products of other specialised groups of producers. This is indisputable. And international trade is in no essential different from domestic trade; it rests upon the same foundation — the division of labor; it produces the same results — a more intelligent use of our productive resources, a larger national income. If our foreign trade is based on

absolute differences in costs, this means but one thing: we allow others to produce those things which they can produce better than we, and buy them with the products of our own efficiency. If the basis of trade is to be found in comparative cost differences, it implies but this: we concentrate our efforts where they are relatively most efficient, while others do likewise. The outcome is the same in both instances — a more productive utilisation of labor, capital, and natural resources, a larger real income for all concerned.

The exact nature of the benefit from trade founded on absolute differences in cost is not difficult to comprehend. If with 10 days of labor the United States can produce 20 units of wheat or 10 units of coffee, while Brazil can obtain 10 units of wheat or 20 units of coffee, exchange of products is certain to bring to each country a greater total return than could be secured by each alone. Suppose the principle of self-sufficiency were followed, with each nation devoting half its efforts to the production of wheat, half to the production of coffee. Then for an outlay of ten days of labor thus evenly divided, the results would be as follows:

<i>Real Income from 10 Days Labor</i>		
	<i>U. S.</i>	<i>Brazil</i>
Wheat . . .	10	5
Coffee . . .	5	10

With trade, however, assuming 10 wheat exchange for 10 coffee (that is, reciprocal demand such that the gain is divided equally), the results would be:

<i>Real Income from 10 Days Labor</i>		
	<i>U. S.</i>	<i>Brazil</i>
Wheat . . .	10	10
Coffee . . .	10	10

The United States has gained 5 units of coffee, Brazil 5 units of wheat.

The benefits from trade resting on comparative differences in cost are parallel. Using the illustration on page 45, it appears that with an outlay of 10 days of labor equally divided

THE MODERN CLASSICAL POSITION 53

between the two products, tires and cloth, real income in conditions of isolation would be:

<i>Real Income from 10 Days Labor</i>		
	U. S.	England
Tires	10	5
Cloth	20	15

If free trade is permitted, however, then with barter terms of 10 tires for 25 cloth (again dividing the gain equally), the total returns to each nation are greater.

<i>Real Income from 10 Days Labor</i>		
	U. S.	England
Tires	10	6
Cloth	25	15

The United States gains 5 units of cloth, England 1 tire.¹ With terms of trade more favorable to England, she would gain more tires, we less cloth; with terms more favorable to the United States, the opposite would be true. Yet in either case, gain there would be. Increased yield from productive efforts is the inevitable outcome of applying those efforts where they are more effective. Of course, English workers would presumably be better off economically were they to move to the United States. Since difficulties stand in

¹ In this illustration, we are concerned with the real income resulting from a common outlay of labor in each of the two countries. Therefore, only the *outcome* of the trading process is shown. Misunderstanding will be avoided if the method by which those results are achieved is explicitly stated.

In the comparative cost illustration on which our calculations are based, with 10 days of labor the U. S. can produce 20 tires or 40 units of cloth, England can produce 10 tires or 30 cloth. The range of possible barter terms of trade is between 20 and 30 units of cloth for 10 tires. Equal division of the gain from trade clearly occurs at 10 tires for 25 cloth. This ratio of exchange we assume to be established.

Let us assume the U. S. devotes 5 days labor to producing 10 tires for domestic consumption, 5 days to producing 10 tires for export, with which it acquires 25 units of cloth. The total amount of English labor, specialising in the manufacture of cloth, required to provide the *same* real income (10 tires and 25 cloth) will be 16½ days. Half this labor, or 8½ days, will produce 25 cloth for export to the U. S. in exchange for 10 tires, the other half will produce 25 cloth for domestic use. To find what a total of 10 days of English labor will produce, in comparison with a similar quantity of American labor, the amount of tires and of cloth must each be reduced in the ratio of 5 to 8½, which gives us 6 tires and 15 cloth.

the way of such migration, relative differences in costs furnish the basis for a trade profitable to both countries.

REFINEMENTS AND QUALIFICATIONS

We may now proceed to trace the steps by which the bald doctrines of the previous pages, valid only for a rigorously simplified and unreal world, have been gradually refined, elaborated, and qualified in an attempt to fit them to the complex realities of international trade.

(a) *Domestic versus International Goods.* — In the foregoing analysis, commodities have been treated as if they were universally the objects of international trade. Each country was regarded as producing only those things in which it possessed an absolute or a comparative advantage, exchanging them for products produced under similar conditions abroad. Prices were found to be identical in all markets (since transportation charges were ignored), though wage levels were seen to differ from country to country, their divergence being determined by relative advantage in production and the state of reciprocal demand. Not all commodities, however, enter into international trade. Many, probably most, goods are both produced and consumed at home. What determines the prices of such domestic, as distinguished from international, products?

The answer is very simple. Whatever the level of wages in a country, its domestic commodities will be relatively low in price wherever labor is used effectively, relatively high in price where labor is used ineffectively. If wages in country A are twice as high as in country B, A's home products will be comparatively low in price wherever her labor is more than twice as effective as B's, relatively high in price wherever her labor is less than twice as effective. Emphatically, high wages need not mean high prices. This is equally true of domestic and international goods.

(b) *Money Wages and Real Wages in Different Countries.* — It has already been made clear that so far as a nation's export industries are concerned, these industries can maintain a

relatively high money wage level only if they occupy a position of absolute or comparative advantage. Moreover, the maximum divergence of wages is limited by the ratio of advantage in the industry of greatest effectiveness. In our earlier illustration, American labor efficiency relative to English was in the tire industry as 2 to 1, in the cloth industry as 4 to 3. If these data are representative of the export industries in the two countries, then in those occupations American workers will receive somewhere between twice and four thirds the pay of English workmen. The *actual* relative level of money wages will depend on the conditions of international demand.

So much for the wage situation in the export industries. What of the level of money wages in industry as a whole? What is the bearing of domestic industries on this problem? Let us continue our discussion in terms of the tire-cloth illustration, and begin by making an extreme assumption. Suppose that certain industries in the United States producing for the domestic market alone are three times as effective as similar industries in England, and that employers in these industries offer wages three times those paid in England. Suppose further that their competition for labor drives wages in the export industries up to the same level. Under such conditions, American tire costs will rise to such a height that their manufacture can no longer be undertaken — both tires and cloth will be imported from England. The stage is now set for the operation of the price specie-flow mechanism. Having, presumably, no other means of paying for our imports, we are forced to ship gold. Prices and wages fall generally in the United States, rise generally in England. This process will continue until checked by the fall of wages to such a level that tires, instead of gold, can move to England in full payment for our cloth imports. This means that the gold movements will not stop until the wages paid our tire workers are something less than twice the level of English wages. Finally, the fall in American wages will be general, not limited to export lines alone, since the effects of a reduction in the supply of money spread throughout the whole economy.

Thus international trade provides direct lines of connection between the money wage levels of the different countries of the world. Prices of exports must be low enough to permit exportation. This implies export wages confined within the limits set by ratios of cost or advantage. Moreover, competition of the export industries for labor insures that wages in domestic industries will be equally high, else workmen will turn for employment to the export lines. Finally, the wage level in domestic industries cannot be higher than that obtaining among producers of exports, for that would compel a rise of export wages to an impossibly high range, thereby bringing into operation, through the monetary mechanism, a general readjustment downward of all prices and wages until these were consonant with international equilibrium.¹ The wage pace is set by the export industries; others must follow.

What determines this pace has already been discussed. Limits are imposed by cost ratios; within these limits, reciprocal demand is the determining factor. A country will have a high wage level if it possesses an outstanding comparative advantage and if the demand for its exports is strong, its demand for imports relatively weak.

But what of that more important type of income, real wages? Does a high money income imply an equally high goods income? So far as imported and exported products are concerned, high money wages are advantageous, for a larger volume of purchasing power is directed against commodities which are low in price for the same reason that the money wages in question are high. Concerning domestic products, however, no generalisation can be made. Real wages will be high in terms of these goods just so far as the effectiveness of labor devoted to their production is great, low so far as that

¹ We are still adhering to the assumption of perfect competition within a nation's borders. Of course, if friction is considerable, wages in different industries for the same kind of labor may vary greatly. It might appear, however, that even with perfect labor competition, effective domestic industries might maintain wages in the export industries at a level very close to the upper limit permitted by the cost ratios. This is to overlook the function of reciprocal demand in determining what actual level can be maintained.

effectiveness is small. The road to a high standard of living thus lies in the direction of promoting freer international trade, so that we may procure a larger volume of those commodities that can be produced cheaper abroad than at home, and in reducing the costs of domestic goods by stimulating efficiency.

(c) *Non-Competing Groups.* — In all the preceding analysis, while wages were seen to differ between countries, it was assumed that they were identical throughout the various industries of a single country. Clearly, however, this assumption is in direct contradiction to obvious economic facts. Wages are by no means uniform from industry to industry even for the same grade of labor. The assumed perfect mobility of labor simply does not exist; impediments of various sorts prevent the free movement of workers from industry to industry that is required to equalise wages. Instead, we find non-competing groups of labor scattered about the industrial landscape, with wages either higher or lower than those commonly paid. It consequently becomes necessary to abolish the unwarranted assumption and to amend the theory by means of some adequate qualification.

Because of the presumed identity of wages throughout industry, it was possible to treat money costs per unit of product as directly proportional to labor costs per unit. If 10 days of labor in the United States would produce 20 tires or 40 cloth, then unit labor costs would be $\frac{1}{2}$ day for tires, $\frac{1}{4}$ day for cloth. At a common wage of \$3.00 a day, unit money costs would then be \$1.50 for tires, \$0.75 for cloth. If, however, wages in the tire industry were abnormally low, say \$1.50 a day, then although unit labor costs are twice as great for tires, as for cloth, the money cost would be the same, \$0.75. Now since money prices are the immediate determinant of the place and person favored with the purchase of goods, the course of international trade might be vitally affected by such wage discrepancies.

To examine their possible effects, let us consider a situation of equal differences in cost, where trade is *ex hypothesi* ruled out.

and see what results follow from the introduction of non-competing groups. It will be recalled that when the export industries of two countries are characterised by equal differences in cost, wages tend to differ in a ratio equivalent to the cost ratio. Our earlier illustration (p. 44) might become stable with figures somewhat as follows:

	Tires				Cloth			
	Labor	Daily	Total	Output	Unit	Daily	Total	Unit
	Cost	Wages	Wages		Cost	Wages	Wages	Cost
U. S. . . .	10	\$4.00	\$40	20	\$2.00	\$4.00	40	\$1.00
England . . .	10	\$2.00	\$20	10	\$2.00	\$1.00	20	\$0.50

American productive efficiency is double the English for both the industries considered. Wages are likewise double, and prices are naturally identical in both countries. Now assume that labor in the English cloth industry is a submerged group receiving wages only half those paid in other lines.

	Tires				Cloth			
	Labor	Daily	Total	Output	Unit	Daily	Total	Unit
	Cost	Wages	Wages		Cost	Wages	Wages	Cost
U. S. . . .	10	\$4.00	\$40	20	\$2.00	\$4.00	\$40	40
England . . .	10	\$2.00	\$20	10	\$2.00	\$1.00	\$10	20

England is now enabled to produce cloth more cheaply than the United States. Cloth will move to America, gold to England, until the familiar price and wage adjustments are sufficient to bring equilibrium. The following outcome may be taken as representative:

	Tires				Cloth			
	Labor	Daily	Total	Output	Unit	Daily	Total	Unit
	Cost	Wages	Wages		Cost	Wages	Wages	Cost
U. S. . . .	10	\$3.50	\$35	20	\$1.75	\$3.50	\$35	40
England . . .	10	\$2.50	\$25	10	\$2.50	\$1.50	\$15	20

Wages have risen in England, fallen in the United States, so that the United States now has a price advantage in tires. The rise of wages of the non-competing group in England has not been sufficient, however, to raise the cost of cloth to the level obtaining in the United States. Trade will continue, American tires being exchanged for English cloth. The results are the same as if the United States had possessed a superior advantage in the production of tires, England an

inferior disadvantage in the production of cloth. Apparently other causes than a simple absolute or comparative advantage may furnish a solid basis for trade.

In the above discussion, the part played by non-competing groups of labor has been deliberately simplified. The English cloth industry was regarded as employing *only* the members of a submerged class of workers. In actual fact, each industry employs many different kinds of labor, among which there may be one or more non-competing groups of workers, receiving either higher or lower wages than those ruling in industry at large for the comparable grade. A sort of hierarchy of labor pervades the industrial scene, varying from country to country and from industry to industry. It would be possible to take account of this diversity in a numerical illustration, but it is clear that it would merely complicate matters, not change them in their essentials. If a particular industry employs an unusually large proportion of abnormally low-paid workers, or if it draws upon an unusually large number of low-paid groups, this fact may be sufficient to give it the equivalent of a comparative advantage in production.¹

The question now remains, how important is the qualification that must obviously be introduced into the clear and simple doctrine of comparative costs? Professor Taussig, who has probably devoted more attention to this subject than any other writer, states both question and answer. He says:

Are we to conclude that the more simple analysis with which we started, resting on the assumptions of homogeneity in labor groups and uniformity in wages, becomes quite inapplicable where there are heterogeneous social and industrial conditions and wide diversities of wages in any one country? . . . The general conclusion . . . is that the existence of non-competing groups within a country affects international trade only so far as the situation is peculiar to that country. If the groups are in the same relative positions in the exchanging countries as regards wages — if the hierarchy, so to speak, is arranged on

¹ If "high-paid" were substituted for "low-paid," the industry would obviously be put in a position equivalent to that of a comparative disadvantage in production.

the same plan in each — trade takes place exactly as if it were governed by the strict and simple principle of comparative costs. The answer . . . depends not so much on the existence of non-competing groups in the several countries as on the similarity or dissimilarity of their make-up. Their bearing on international trade depends on whether they are of the same sort or of different sorts in the trading countries. Now, in the occidental countries — those of advanced civilisation in the Western world — as a rule the stratification of industrial groups proceeds on the same lines, and it is between these countries that the principle of comparative costs is presumably of greatest importance . . . in the Western countries, to repeat, we find roughly the same social and industrial layers. The unskilled, by far the most numerous, get the lowest wages; the mechanics and well-trained stand distinctly higher; and so upward. This being the case, the differences in money costs between the countries are mainly determined by differences in labor costs; even tho within each country this factor may be profoundly modified.¹

The position of followers of Ricardo and Mill, represented by Professor Taussig, is clear and definite. The doctrine of comparative costs is still valid. Only so far as the hierarchy of non-competing groups varies from country to country is it necessary to introduce another governing principle into the explanation of international trade. And in actual fact, the new principle is of only minor importance, since we may regard the Western countries as possessing a similar industrial stratification (while the trade between tropical and temperate regions is mainly based on absolute cost differences).

That he regards a varying labor stratification as having *some* bearing on the course of foreign trade, Professor Taussig indicates in citing the German chemical industry and the American iron industry (prior to 1914). In the former, employers were able to secure chemists, chemist's assistants, and other types of highly-skilled workers at abnormally low rates of pay, while in the latter, an unusually large supply of unskilled labor reduced its wage level to an extraordinary degree. To a considerable extent, the ability of both industries to export rested upon these facts.

¹ F. W. Taussig; *International Trade*, pp. 47-48, 55-56.

(d) *Capital Charges.* — Let us now modify still further our first simple assumptions, and take one step more in the direction of reality by introducing the complication arising from the use of capital. Hitherto, labor has been regarded as the sole factor involved in production, the wages bill as comprising all money costs. (All necessary labor has been implicitly included, that devoted to producing raw materials as well as fabricating the finished product.) Yet interest on capital is equally an expense, capable, where heavy fixed investment is required, of dominating money costs. This important new element would seem to demand further amendment of the original theory.

If both interest rates and the proportion of capital to labor in each industry were the same throughout the world, the mere existence of an interest charge could have no influence on international trade. All prices would simply be boosted by a given percentage. Nor would any permanent effect appear even if interest rates or the capital-labor proportion varied from country to country, provided these differences applied to all commodities alike. For this would merely raise the money costs of a country with heavy capital charges by a given degree throughout, a result identical in effect to the reduction of that country's ratios of labor effectiveness. Only when the burden of interest charges bears differently on the different commodities in different countries does it have to be taken into account as a factor influencing trade movements.

Just what part is played by varying interest charges can best be made clear by an example. Let us use again the illustration of equal differences in cost (page 58), adding to the costs of production of cloth a capital charge which is relatively higher in the United States, while continuing to assume that wages represent all costs in the tire industry. This amounts to stipulating that the cloth industry is a relatively large user of capital. Suppose the rate of interest in the United States is 6%, in England, 3%, but that the relative use made of labor and of capital in the production of cloth is the same — say \$100 of capital equipment is

used for every \$10 outlay on wages in both countries. Cost figures then become:

Labor Cost	Tires					Cloth					
	Daily Wages	Total Wages	Out- put	Unit Cost	Daily Wages	Total Wages	Interest Cost	Total Cost	Out- put	Unit Cost	
U. S. . 10	\$4	\$40	20	\$2	\$4	\$40	\$400 @ 6%	\$24	\$64	40	\$1.60
England 10	\$2	\$20	10	\$2	\$2	\$20	\$200 @ 3%	\$ 6	\$26	20	\$1.30

The price of cloth is now lower in England, owing to the smaller burden of interest charges. The price specific-flow mechanism is called into operation; in the end, equilibrium would be established with wages and prices somewhat lower in the United States, somewhat higher in England. A price advantage in cloth would presumably remain with England, a price advantage in tires would go to the United States, and trade would continue in those commodities. A non-trading situation is changed into a trading situation, all because of the interest factor. A relative difference in the incidence of capital charges in the two countries replaces comparative differences in cost as a cause of trade. For goods made with much capital, a low rate of interest tends to give a country the equivalent of a comparative advantage.

As to the quantitative importance of this theoretical amendment, the consensus of opinion among followers of the classical economists seems to be that it is not great. As Professor Taussig points out, its range of influence is limited to special circumstances; not only must interest rates vary, but the relative use of capital must likewise be different.

High or low interest does not in itself act as an independent factor; it exercises an influence of its own only so far as it enters to greater degree in one commodity than another.

Moreover, Professor Taussig feels that variations in interest rates, at least between western countries, are not of sufficient magnitude to be significant.

... since, as a matter of fact, the differences in the interest rate between countries are not considerable, we are justified in concluding that this element in the economic situation, like the

element of persisting differences in wages to different workers, does not lead to a radical modification of our first conclusions.¹

Another aspect of the use of capital involves, if we are to be accurate, a reformulation of the labor costs in our illustrations. Capital is used in conjunction with labor; but it represents, since it is itself a product of labor, a more roundabout and indirect application of that labor. Production requires not just current labor, but current labor combined with past labor. Furthermore, these roundabout or capitalistic methods are more productive than direct methods. Hence our figures of labor cost should be, for a given output, not merely 10 days of labor, but a somewhat smaller total compounded of current and past labor — say 3 days current and 5 days past.

While this added complication requires no alteration of the theory of international trade, it has a significant bearing. For it indicates an important cause of variations in comparative advantage. Not only do capitalistic methods increase the effectiveness of labor, but these methods are themselves applied with varying degrees of effectiveness in different industries and in different countries. Consequently, those commodities in the production of which a country can use tools and machines better than can other countries will tend to be exported; their labor costs will be relatively low because labor is more effectively applied there than elsewhere. Such efficient utilisation of roundabout methods is an important factor underlying American exports of automobiles and typewriters, English exports of textiles and ships, and German exports of chemicals and electrical equipment.

(c) *Varying Costs.* — Let us now drop the assumption that unit cost remains the same no matter what the volume of production. If commodities are produced, as in fact they are, under conditions of increasing and perhaps also of decreasing cost, what consequences does this involve for theory?

If unit costs increase as the scale of output of an entire industry is enlarged (owing to the pressure of diminishing

¹ F. W. Taussig, *op. cit.*, pp. 67-68.

returns), the effectiveness of labor must be declining. A country specialising in such an increasing-cost good will find its comparative advantage becoming smaller and smaller, as the output of this commodity increases. Hence it will be able to offer less and less of this product in exchange for the exports of other countries. The range of the possible barter terms of trade will be steadily narrowed.

If, on the other hand, unit costs fall as output is increased, the terms of trade will be widened as demand for these products grows. For falling unit costs represent an increasing comparative advantage, a rising effectiveness of labor. A country specialising on a decreasing-cost commodity will be able to offer more and more of this product in trade as the growing scale of production lowers costs.

Relaxation of the original constant-cost assumption requires no amendment or qualification of the basic theory, but does make necessary a more elaborate statement. Increasing and decreasing costs indicate a falling or rising comparative advantage; they imply further a narrowing or a widening of the possible barter terms of trade.

A further peculiar consequence of diminishing returns is of considerable importance. The entire supply of goods produced at increasing cost will seldom be drawn from the most favored producing locality, even though its comparative advantage be great; some portion of the output will be produced locally over a wide area. Thus, though Great Britain secures most of its wheat from the low-cost countries of the new world, nonetheless a not inconsiderable amount of wheat continues to be raised in the British Isles. This result springs from the fact that land (to continue our agricultural illustration) is not all of equal fertility. While Canadian wheat costs are low, and any attempt to meet British requirements entirely from domestic production would raise costs to an inordinate height, yet there are *some* British acres on which wheat can be produced at costs as low as in Canada. Hence the scattered production of wheat, even in the face of great international specialisation. As the prices of such

increasing-cost products rise, localised production will expand, and because of the increasing demand for land, local rents will tend to rise. The opposite results will follow a fall in their prices.

(f) *Numerous Commodities.* — In all the preceding discussion, trade has been treated as if it were confined to two commodities and to two countries, each country specialising upon and exporting one product. In the real world, however, there are many trading nations, and innumerable goods cross national boundaries. Let us now relax these conditions, first by introducing additional commodities produced under varying degrees of comparative advantage.

Let us return to the simplest conditions, considering only labor cost, and suppose that the United States and Japan are both capable of producing glass, steel, and silk, the former country having a comparative advantage in all three commodities, though of different degree for each. Suppose further that wages are set — by the play of international demand — at \$3.00 a day in the United States, at \$1.00 a day in Japan. The following figures illustrate such a situation:

	Glass			Steel			Silk		
	Labor Cost	Daily Wages	Total Wages	Output Unit	Output Cost	Unit Cost	Output Unit	Output Cost	Unit Cost
U. S. . . .	10	\$3.00	\$30	10	\$3.00	10	\$3.00	10	\$3.00
Japan	10	\$1.00	\$10	2	\$5.00	3	\$3.33	8	\$1.25

With these assumed data, the cost of glass and steel is lowest in the United States, of silk in Japan. Glass and steel will then move from the United States to Japan, in exchange for Japanese silk, the quantities involved being presumed to be such as to bring about a balance of international payments.

Had we begun, however, with a state of international demand sufficient only to maintain a wage level of \$0.75 a day in Japan (a situation less favorable to Japan), the results would have been as follows:

	Glass			Steel			Silk		
	Labor Cost	Daily Wages	Total Wages	Output Unit	Output Cost	Unit Cost	Output Unit	Output Cost	Unit Cost
U. S. . . .	10	\$3.00	\$30.00	10	\$3.00	10	\$3.00	10	\$3.00
Japan	10	\$0.75	\$ 7.50	2	\$3.25	3	\$2.50	8	\$0.93

The United States can still undersell Japan in glass but no longer in steel, for American labor efficiency in steel is only a little over three times as great as Japanese while wages are four times as high. Steel and silk are now both produced in Japan, glass alone in the United States.

One other alternative with regard to international specialisation remains. If international demands are somewhat more favorable to Japan than in the last illustration, though not quite as favorable as in the first, so that a Japanese wage level of \$0.90 per day is set, the situation becomes:

			Glass		Steel		Silk		
	Labor	Daily	Total	Output	Unit	Output	Unit	Output	Unit
	Cost	Wages	Wages		Cost		Cost		Cost
U. S. . .	10	\$3.00	\$30.00	10	\$3.00	10	\$3.00	10	\$3.00
Japan . . .	10	\$0.90	\$ 9.00	2	\$4.50	3	\$3.00	8	\$1.12½

The cost of glass continues to remain lowest in the United States, of silk in Japan, while the cost of steel is identical in the two countries. Glass and silk will move in payment for one another; steel will be produced for domestic consumption in both nations.

The conclusions to be drawn from these illustrations seem obvious. The principle of comparative advantage still holds; each country produces that commodity in which it has the *greatest* advantage or the *least* disadvantage. As regards intermediate commodities, the outcome is uncertain; which country produces these depends on conditions of reciprocal demand.¹

The number of commodities could easily be increased from three to any given total. We could then list these commodities in order, according to the degree of comparative advan-

¹ The argument with regard to the connection between reciprocal demand and wage levels is not reproduced here; the forgetful reader may be referred to pp. 47, 48, and 49. It would, of course, be possible to attack the problem directly, in terms of ratios of advantage and barter terms of trade. In order to economise space, this has not been done. The interested reader could work this out for himself, using the output figures above, and calculating the various possible barter terms of trade in accord with the assumptions he makes relative to reciprocal demand. For such an analysis, see Taussig's *International Trade*, Chapter 9.

tage obtaining in their production in one of the two countries whose costs were being compared. A full list would begin with the highest comparative advantage for the country in question, run through a constantly diminishing scale of comparative advantage until the comparative disadvantage became also an absolute disadvantage, with the ratio of advantage being equal for some one or more commodities in between the two extremes. The following abbreviated schedule may be taken as representative:

	A	B	C	D	E	F
Country I	10	10	10	10	9	7
Country II	2	3	8	10	10	10

Those commodities at the top of the list for Country I (commodities A and B) would in all likelihood always be produced there, those at the bottom of the list (commodities E and F) in Country II. For Country I, the comparative advantage of producing A and B, relative to all other products, is greatest, while for Country II, the comparative advantage in producing E and F is greatest. It also happens to be true that in the production of A and B relative to E and F, Country I has an absolute advantage, while in the production of E and F relative to A, B, and C, Country II has an absolute advantage. Looking at the matter from the point of view of all the commodities involved, however, it is obvious that absolute advantage is simply an exceptionally large comparative advantage.

Whether C or D — or for that matter, under certain conditions, B or E — will be produced in Country I or Country II depends upon the state of reciprocal demand. The precise commodity dividing the list into top and bottom, or into exports and imports, will vary with the shifts in international demands (and, of course, with changes in conditions of production). The simple doctrine of comparative advantage still holds good; the only amendment required is to admit reciprocal demand to the role of determining, not only the actual barter terms of trade, but also which country will produce certain commodities lying in an intermediate zone.

(g) *Numerous Countries.* — Now let us examine briefly the consequences of introducing more than two countries with varying cost ratios. Revert to our original simple assumptions, considering only labor costs with respect to two commodities. Suppose that in three countries, the United States, England, and Germany, the comparative advantage set-up for tires and cloth takes the following form :

	<i>Labor Cost</i>	<i>Tire Output</i>	<i>Cloth Output</i>
United States	10	20	40
England	10	10	30
Germany	10	10	25

As before, tires may move from the United States in exchange for English cloth, within a range of possible barter terms of trade of 10 tires for 21 to 29 cloth. If the barter terms lie within the range of 10 tires for 21 to 24 cloth, the United States will presumably buy some of its cloth from Germany, sending tires in payment. If, on the other hand, the terms fall within the upper range of 10 tires for 26 to 29 cloth, it will be to Germany's advantage to produce not cloth but tires, obtaining with this product the cloth she needs from England. Yet another outcome is possible: if the actual terms of trade are exactly 10 tires for 25 cloth, Germany will be effectually excluded from trade, and will produce both commodities for herself. In any event, the United States will produce tires, England cloth. But as regards the third country, Germany, three possibilities emerge: she may produce cloth, sending it (together with England) in exchange for American tires; she may produce tires, exchanging them (in common with the United States) for English cloth, or she may manufacture both products herself.

Which of the three possible alternatives becomes the actual appears to depend upon the precise barter terms arrived at, while these in turn are determined by the relative strength of international demands. The answer to the problem, what will be the channels of active trade where more than two countries are concerned, turns out to be the same as with

multiple commodities: reciprocal demand is the deciding factor. The results will be worked out, also, in an identical manner: through the impact of international demands upon wages and prices in the various countries. When the demand for tires is strong, that for cloth weak, wages in both the potential tire-producing countries (the United States and Germany) will be high *relative to wages* in England, and Germany as well as the United States will manufacture tires in exchange for English cloth. When, however, the demand is strong for cloth and weak for tires, wages in the two potential cloth-producing countries (England and Germany) will be high *relative to wages* in the United States; then both England and Germany will send cloth to the United States for tires. With a special intermediate demand situation, Germany will be excluded from international trade.¹

(h) *Further Qualifications.* — The more important qualifications required to make the classical theory of international trade correspond more closely with reality have now been considered. Not all the original simplifications, however, have been covered in the discussion. For the sake of consistency and thoroughness, let us briefly examine those omitted.

Transportation charges are of considerable quantitative importance, yet their direct effect upon the traffic in goods is limited. Some commodities are, because of costs of carriage, excluded from international trade altogether. In this category would fall all those articles for which differences in production costs were less than transport charges. As regards traded goods, the volume of international shipments will be somewhat restricted, owing to the inclusion in their

¹ Further complications lurk under the surface. In the above illustration, with a strong tire demand, for Germany to be able to compete with the U. S. in the sale of tires in England, wages in that country must be just half American wages, to offset her relative inefficiency. With a strong cloth demand, German wages must be just five-sixths of English wages, for a similar reason. Equilibrium, it will be noted, can exist only with these precise wage ratios, so long as labor effectiveness is as given. In the intermediate case, German wages must be half of American wages and, at the same time, five-sixths of English wages.

prices of this additional cost item. In the language of barter terms of trade these terms will be confined within narrower limits.

If instead of free trade, tariff barriers are assumed to exist, these will have effects similar to transportation charges. The imposition of a tariff reduces the volume of international trade and therewith the benefits derived from international specialisation. Moreover, the higher the tariff is raised, the narrower becomes the range within which the barter terms of trade are confined.

The question of the internal mobility and the external immobility of the factors of production has been examined from but one angle, the lack of free movement between non-competing labor groups. But capital and business ability likewise flow into the various industries of a country with varying degrees of freedom, while perfect immobility of the factors by no means characterises the international situation. The more these assumptions have to be relaxed, the more nearly will the conditions of international and of domestic trade resemble one another, with parallel results for theory. With the exception of non-competing groups, writers in the classical tradition have given very little attention to this problem. Mainly for this reason, it is merely mentioned here. The question will be more fully discussed in the critical chapter to follow.

Finally, because this chapter has been primarily concerned with an explanation of goods movements rather than with the monetary mechanisms of adjustment, the violently unrealistic assumptions of a universal gold money and a rigid quantity theory will also be left untouched. They were introduced principally to avoid complicating the analysis of trade with an elaborate adjustment mechanism. Their truth or falsity is of less moment to the theory under discussion than the other assumptions. The problems involved can be more suitably considered when we come to the related but distinct subject of the monetary aspects of international commerce. At that point also we can more conveniently

take into account the invisible items which have so far received only casual mention, as well as make some allowances, at least, for the fact that the actual world is one characterised not by all-pervading equilibrium but by large and recurrent fluctuations of economic activity.

SUMMARY

It is now possible to attempt to see as a whole the rather complex structure that has been reared. At the outset two principal questions demanding solution were posed: (1) What commodities will move in international trade, and why? (2) What governs the terms on which these commodities will exchange, in settled equilibrium conditions? Still a third, though for the time being, a subordinate question, was raised: (3) How are disturbances of equilibrium adjusted?

Under the simplest of assumed conditions, and considering only two countries and two commodities at a time, definite answers were reached. (1) Each country will produce and export that product in which it has either an absolute or a comparative difference in (labor) cost or advantage. (2) The possible terms of barter exchange fall within a range determined by cost ratios in the two countries; the actual barter terms of trade are governed by the volume and elasticity of international demands. (3) The mechanism by which stable trade conditions are arrived at, or by which departures from equilibrium are corrected, is the familiar one of price specie-flow; through its operation, levels of incomes and prices are established which are suited to the underlying cost conditions.

But these answers were merely a first approximation, valid only for an over-simplified hypothetical situation. One by one, each assumption had to be examined, and where necessary discarded or disqualified, the theory then being altered to accord with the changed assumptions. The result was a series of qualifications and elaborations of the basic theory outlined above. Ignoring mere elaboration, the significant amendments found to be required were as follows:

(1) So far as non-competing groups are different in nature or in relative importance from country to country, they must be considered equivalent to comparative advantage as a cause of trade. Such heterogeneity in the structure of labor is to be regarded as exceptional, however, in the western world. (2) Capital charges likewise may take the place of comparative advantage, to the extent to which they constitute a different proportion of the total cost of different commodities in different countries. This disturbing factor, too, is treated as an exception. (3) The presence of increasing or diminishing returns merely involves a variation downward or upward in the international cost ratios. (4) When numerous commodities, produced at varying degrees of comparative advantage, are considered, it appears that the borderline between *effective* comparative advantage or disadvantage is regulated by reciprocal demand. (5) As between numerous countries with different cost ratios, it appears that reciprocal demand also determines where the production of each commodity will take place.

SUGGESTED REFERENCES

Taussig, F. W., *International Trade* (The Macmillan Co., New York, 1928).
Chapters 1-10, 14-15.

Taussig, F. W., *Principles of Economics* (The Macmillan Co., New York, 1923). Chapters 34-35.

Haberler, Gottfried von, *The Theory of International Trade* (The Macmillan Co., New York, 1935). Chapters IX-X.

Sinclair, Huntly M., *The Principles of International Trade* (The Macmillan Co., New York, 1932). Chapters 9-12.

Harrod, R. F., *International Economics* (Harcourt, Brace & Co., New York, 1933). Chapters II-III.

Viner, Jacob, "Professor Táussig's Contribution to the Theory of International Trade," Part I, Chapter I of *Explorations in Economics* (McGraw-Hill Book Co., New York, 1936).

Viner, Jacob, *Studies in the Theory of International Trade* (Harper & Bros., New York, 1937). Chapter VIII.

CHAPTER IV

CRITICISMS OF THE CLASSICAL APPROACH

THE classical theory of international trade speaks with the dominant voice of authority. From the publication of Ricardo's *Principles* down to the present day, the principle of comparative cost — elaborated, qualified, and supplemented by a long series of writers — has formed the core of the only generally accepted explanation of international trade. In the English-speaking countries, adherence to the classical doctrines has been almost a prerequisite to the title of economist, and while in Europe acceptance of these principles has been less widespread, even there no alternative analysis has attracted a comparable number of followers. Translated into the language of textbooks, the ideas of Ricardo and Mill have been passed on to thousands of students as final verities, as indisputable as the law of diminishing returns or the advantages of the division of labor. Yet the theoretical structure rests upon exceedingly shaky foundations, foundations, moreover, which are essentially inconsistent with other important aspects of classical economic thought. It will be the task of this chapter to undertake a systematic statement of the more significant criticisms which have been directed against the classical theory of international trade.

Because the views to which we have devoted so much space have enjoyed a position of preeminence, it would be wrong to conclude that critics have only recently, in a period of general self-analysis and criticism, raised their voices in protest. Continental writers early (Cournot, 1838) stated cogent objections to the orthodox system; at their hands the literature of dissent has assumed considerable proportions.

Challenges from English economists began to appear in the last quarter of the nineteenth century. Of most of these earlier criticisms, however, it may be said that they were concerned with specific points, often with matters of technical detail. In recent years, not only has the attack increased in volume — it has broadened its front as well, being now interested primarily in the validity of the whole classical approach. We may now proceed to consider the arguments of the critics. No historical survey will be attempted — we shall merely give a résumé of the more fundamental objections.

Perhaps the most vital criticism is one directed against the assumption with which all statements in the classical tradition begin — the assumption of a labor-cost theory of value to explain the domestic exchange of goods. Commencing with the supposition that commodities exchange within a country on the basis of their labor costs of production, the classical analysis recognizes that the international immobility of the productive factors requires the introduction of a different principle to explain trade between different countries. Such a principle is found in the *comparative labor costs* of producing the various articles of trade.

In the explanation of relative values within a country, however, the labor-cost theory was long ago given up. The existence of non-competing groups of labor, contributing to the value of the product in proportions quite different from their contributions in terms of labor time, alone compelled recognition of the inadequacy of a theory explaining value by quantities of labor effort. Equally foredoomed was any attempt to analyse value by a broader real-cost approach, including with labor the costs of capital (waiting) and of enterprise (risk). For this would entail adding together the cost contributions, not only of qualitatively different grades of labor, but also of entirely distinct factors whose qualitative differences are even greater. Thus the units comprising a given real cost would be quite incommensurable. Indeed, no homogeneous unit of real costs can be found, for no such unit exists. Money alone furnishes a common denominator.

Once these conclusions were reached, once it was recognised that real costs cannot be measurably related to value, this whole approach was abandoned. The modern explanation of value takes one form or another of the familiar demand-supply analysis, both demand and supply being expressed in monetary terms. Money costs are the only measurable costs, their magnitudes being ultimately explainable by the relative scarcity of the factors of production. Real costs—the human sacrifices involved in production—though still regarded as important, assumed the position of a partial but non-quantitative explanation of the scarcity of the factors.

Yet, curiously enough, even those economists, like Marshall and Taussig, who adopt this line of attack upon the general value problem, revert in their discussion of international values to the simplest labor-cost assumptions. Any theory embodying the principle of comparative cost must involve such an atavism, for comparative costs can only mean comparative labor (or real) costs. Of course the inadequacy of this principle, unadulterated, is fully recognised; various attempts to reconcile it with the facts have not been wanting. Let us examine some of the solutions offered.

Professor Taussig's method of handling the problem, outlined in the previous chapter, is very ingenious. With regard to non-competing groups, the frank admission is made that within a country, the prices of goods will not be proportional to the quantities of labor devoted to their production. Likewise in international trade—there, too, the sale of goods depends on prices, "and prices are not necessarily, perhaps not usually, determined by quantities of labor given to producing the goods." Yet in spite of these facts, if the structure of labor groups is the same in trading countries, prices will be affected to the same degree, and the validity of the basic explanation of international trade remains unimpaired—"trade takes place exactly as if it were governed by the strict and simple principle of comparative costs."¹ Only if the hierarchy of labor varies from

¹ Taussig, *International Trade*, pp. 47-48.

country to country must non-competing groups be reckoned with as an independent factor affecting trade. This factor, moreover, operates only as an exception to the general rule, for among western nations the social and industrial layers are "roughly the same."

Notice, however, what assumptions are involved. If non-competing groups are to be relegated to a position of subsidiary importance, not only must labor stratification in a broad sense be identical in the industries compared — the relative wage differences of the various groups must be and must remain the same, as must likewise the relative numbers of the different grades of labor employed. For even though the same kinds of labor were used in any given industry wherever located, variations from country to country in the relative rates of pay of these different types of labor or in the relative numbers of these groups employed would establish differences in money costs where otherwise none would exist. Yet it is a known fact that changes in technique frequently alter the proportions of the various kinds of workers needed, while variations in relative rates of wages are constantly occurring. If similarity in the stratification of labor ever existed, it must have been very rough and very temporary.

Capital charges are handled by Taussig in similar fashion. Though interest is a cost, and as such, an important element in a general theory of value, its recognition need not rule out comparisons of labor cost as the ultimate determinant of international trade. As long as the relative burden of capital charges is identical from industry to industry in trading countries, prices are raised, in the same degree, and hence are proportional to simple labor costs. The assumption of such a similar incidence is believed to be warranted. The differences in interest rates, as between the leading industrial nations, are presumably unimportant. Furthermore, the relative use of capital in the industries of these countries may be regarded as essentially the same. By such reasoning are capital charges reduced to the status of an exceptional influence.

What may be said against these arguments? In the first place, this view greatly underrates the importance of international variations in interest rates. Differences of from one to two per cent (on the same type of loans) have persisted for long periods of time, even between the western nations. And a capital charge of five per cent, though it is only one per cent higher than a charge of four per cent, involves an interest burden that is twenty-five per cent greater in magnitude. It may be added that ever since the war, interest rates in Germany and other central European countries have ranged from eight to ten per cent and even higher, while in England and the United States the charge for similar loans has averaged close to six per cent.

As regards the capital structure in the various industries, this, like the composition of labor groups, is constantly being altered in all countries under the pressure of changing industrial processes. The relative use made of capital, if it ever was the same in any two countries, could scarcely have remained so for long. Moreover, a low rate of interest promotes the introduction of more capitalistic methods, thereby changing the nature of the capital structure.¹ Rather than being merely a special influence, this must be regarded as one of dominant importance. Great Britain and the United States, with plentiful supplies of capital and low rates of interest, have long been noted for their great use of machinery and other forms of capital equipment; Poland and the Balkan countries, on the other hand, where high interest rates rule, are compelled to resort to more primitive methods. Surely an influence which vitally affects the very industrial structure of nations can scarcely be regarded as "restricted to a special set of circumstances."

In the attempt to avoid the difficulties involved in basing the theory of international trade on a labor theory of value, Bastable adopted a different approach. Instead of making

¹ "A low rate of return on capital, then, tends to give to a country a comparative advantage (*i.e.*, the equivalent of one) for those goods which are made with much capital; these tend to be exported from it." Taussig, *op. cit.*, p. 66.

comparisons of labor effectiveness alone, he attempted to compare as to their productivity all the agents of production. "Units of productive power," a sort of (undefined) blend of land, labor, and capital, were to be imagined. International comparisons were then made of the output obtainable in different industries from a given quantity of such units. Thereby a broader statement of comparative advantage was derived, expressing not merely labor effectiveness, but the efficiency of all the factors working together.

Though this attempt at realism is more direct than the piecemeal introduction of qualification after qualification, it cannot be regarded as satisfactory. For to make a valid quantitative comparison of the efficiency of the various factors of production operating in combination, one of two things must be true. Either (1) these "units of productive power" must always be compounded in the same proportions, or (2) if the proportions are allowed to vary, the agents compounded must be capable of being resolved into one another, that is, they must be commensurable. But the ingredients of land, labor, and capital in these units cannot be held constant if they are to be applied to industries of the real world, for there the proportions of the factors vary widely; the productivity of the assumed units would not represent the productivity of actual factors working in totally different combinations. Nor can the proportions of the component parts of these units be varied, since land, labor, and capital are generically different; no one of these factors can be expressed in terms of another. Varying the proportions would lead to a comparison of the productivity of essentially dissimilar units. Thus Bastable's solution faces a dilemma: units of fixed composition cannot be applied to varying industrial conditions, while units of changing composition cannot be compared as to results.

The attempt to utilise the classical approach, while avoiding its inconsistencies, still goes on. The latest proposed modification takes the form of stating the law of comparative costs in terms of commensurable cost units. In a compara-

tively recent volume,¹ R. F. Harrod states the problem and his solution in the following lines:

Since this is an attempt to define comparative cheapness of production, it is necessary to have a unit for measuring cost of production. The same unit need not, and indeed cannot, be used for measuring cost at home and abroad. Cost may be measured in terms of trouble or effort or in terms of the reward that is paid for effort; this reward may again be measured as so many baskets full of consumable goods, or as so much money. Happily for the present purpose it does not matter which method be adopted. *All methods must presuppose that different kinds of cost, e.g. labour skilled and unskilled, waiting, the use of land or mines, can be measured against each other in the same country.* Commodity A may take more land per unit of labour expended on it than commodity B. To compare the cost of producing A with that of producing B, we must be able to equate land to labour as elements in cost, to say that, for instance, 1 labourer per annum = 100 acres per annum, or, = 150 acres per annum.²

Exactly. The problem could not be more clearly stated. If we are to compare costs, we must compare the same thing; hence we must have a common unit of measurement. Qualitatively different costs must be expressed in terms of a common denominator. It is also true that "cost may be measured in terms of trouble or effort or in terms of the reward that is paid for effort." Few, however, would agree with Mr. Harrod that "it does not matter which method be adopted."³ For while the cost of labor, of capital, or of enterprise may each be stated in terms of trouble or effort, we still do not have a common measure of cost, for the effort involved in laboring is not the same as that required in saving, nor is either type the same as that called for in guiding enterprise. Moreover, there is no effort cost attached to the use of land. If, on the other hand, we measure these different costs in terms of rewards paid, we are using a value or money measure of costs, whether the unit be baskets full of consumable goods or money proper.

¹ R. F. Harrod, *International Economics*, London, 1933.

² *Ibid.*, p. 15 (italics mine).

³ *Ibid.*

Which of these alternative methods of cost measurement, choice between which is supposedly a matter of indifference, do we find Mr. Harrod using? In his very next sentence, he says:

If the relative values of the various factors of production are determined, it is then possible to compare the cost of producing commodities A, B, C, etc., in the same country unequivocally.

Money costs of production are to be compared, for the simple reason that the only way in which different (real) costs *can* be compared, even in the same country, is by first expressing them in terms of value or money. Yet only twelve lines later we find Mr. Harrod saying:

Let us suppose that they (commodities A, B) each cost x units to produce. It is well to leave it undecided whether this means x , x labour days, or x baskets full of commodities, etc.

How can we leave it undecided when in the nature of things it has already been decided for us? Too much emphasis cannot be given to the fact that the only common measure applicable to economic phenomena, whether we be comparing commodities, services, or costs, is the value measure. How can we suppose costs to be "x labour days" when it is impossible to express the costs of saving, of enterprise, or of land in terms of labor, or, indeed, in terms of anything except pounds sterling, dollars, baskets full of commodities, or some other value unit?

The difficulty of reconciling the labor or real costs approach with the facts of varying combinations of the factors of production, the difficulty, *in fact*, of finding *any* unit of costs — other than a money unit — that can serve as a basis of comparison, suggests an obvious conclusion. Why not scrap the whole real-costs approach, as economists have scrapped it in dealing with the general problem of value, and attack the problem of international trade by analysing the causes determining prices, since it is prices that determine what goods will move and who will produce them? Such a solution would seem more direct, more logical, and more

consistent with other views of the very economists who continue to use the methods of Ricardo and Mill in the field of international trade. The answer is that this type of analysis has been adopted by at least one modern writer. It will be the task of the next chapter to consider the results he has achieved.

It should be clear by now that the labor-cost theory of value inevitably requires the assumption that the various factors of production are always combined in the same fixed proportions. For if value is to be measured by labor cost alone, then if other kinds of cost are admitted to exist, they must always constitute a constant percentage of total costs — otherwise, value would be determined by something other than labor cost. Now this assumption of fixed proportions of the productive factors not only renders the classical theory inapplicable to the real world, where the proportions of the factors vary widely, but it also (together with the presumed similarity of non-competing groups) rules out consideration of the effects of international trade upon income distribution. For the relative scarcity of each of the factors is assumed fixed and unalterable, while the relative wage rates of the various strata of labor must remain the same from country to country. Therefore an increase in demand for a country's exports can only raise wages generally and heighten equally the scarcity of all the factors. As a matter of fact, such an increase in demand, since it impinges upon the export industries rather than others, would tend to raise the wages of those non-competing groups and the returns of those factors which are of relatively great importance to these particular industries. Thus it appears that the distribution of incomes is not purely a domestic affair, but is closely related to the facts of international trade. This relationship has — as a logical consequence of their premises — been avoided in the investigations of the classicists.

The assault on the classical position has not been limited to the labor theory of value and the assumption of constant factorial proportions. Another major object of the critical attack is to be found in the premises regarding the mobility

of the agents of production. Both the supposed internal mobility (qualified by the recognition of non-competing groups) and its counterpart, international immobility, are held by critics to be out of accord with the facts. Freedom of movement of the factors within a country, between different regions as well as between various industries, is far from perfect. Wages in the Southern states of this Union are notoriously lower, for the same grades of labor, than in other portions of the country. The interest charged on comparable types of loans ranges generally higher in the west and in the south than in the metropolitan east. Consider also, for example, labor and capital in the coal mines of Great Britain and the United States. For years these industries have been seriously depressed in both countries, yet in neither has the transfer of labor and capital into more prosperous occupations been sufficient to bring appreciable relief. Again, American and Canadian wheat acreage, which expanded rapidly during the War, shrank thereafter too slowly to offset a decline in demand and the resumption of production in former belligerent countries. The general prevalence of unprofitable prices failed to provoke an outward movement of the factors sufficient to restore equilibrium. Sixteen years after the War, when the problem became intensified as a result of the depression, a government-imposed crop-restriction program was introduced in the United States as a substitute for the voluntary "natural" adjustment which various types of friction prevented from coming about. A similar maladjusted situation has existed in the Cuban sugar industry, the East Indian rubber plantations, and the Brazilian coffee fields. It is not suggested that adjustment *never* takes place, but simply that it may occur so slowly that for considerable periods of time the immobility of the factors significantly affects prices. And since prices are the proximate cause of trade, it follows that for relatively long periods the very course of international trade is affected. Indeed, one may go even farther and say, as has one critic,¹ that this internal

¹ John H. Williams, *Economic Journal*, Vol. 39, p. 195.

immobility and its effects are actually the *results* of international specialization — that a country like England, Cuba, or Brazil, commits itself through such specialisation to a particular industrial organization, under which alternatives to the production of exports simply do not exist, or exist in a very limited form.

A further criticism of the classical treatment of international trade problems is directed against the nature of the solution offered. The analysis, it is held, is essentially static. From beginning to end only a cross-section of the facts is studied, with primary concern shown for the value problem alone. Moreover, an implicit static assumption, that the amounts of the factors of production are given, is never relaxed to permit treatment of changes in factor supplies. In contrast with this over-rigid, cross-section approach is the essentially dynamic nature of the facts. While prices are the immediate cause directing the flow of goods, prices and goods movements are by no means isolated phenomena, but influence, and in turn are influenced by, transfers of the productive agents, changes in the structure of industry, and variations in the development of natural resources, to mention but a few of the related factors. Because its method is cross-sectional and static, the classical attack is, it is felt, ill-equipped to grapple with such a dynamically changing subject matter. The conclusion is obvious: either a new type of analysis, more suited to its field, must be evolved to supplant the older approach, or a very considerable amount of supplementary investigation must be undertaken.

Somewhat similar in nature is a still further objection to the Ricardo-Mill-Taussig formulation of theory: that it is unduly cumbersome and unreal. In dealing with one of its central problems, why a given country exports certain commodities and not others, the classical theory avoids the obvious and straightforward approach, taking instead a perversely indirect route. Ohlin puts this point well:

The simple, straightforward course is, naturally, to take a complete cost account in the different countries for the commodity

in question and to examine to what extent the cheapness of production in one country is due to low wage expenses, low interest expenses, low transportation expenses, etc. Then the next step is to go behind these cost items and examine their relation to the quantity of labour employed, the wage level, the quantity of capital employed, the interest level, etc.; in other words, the relations of the cost items to the price system in each country. The orthodox theory does not permit such a simple procedure. First the data must be used to calculate output per manual worker and then the result must be compared with the wage figures in the various countries. In many cases it is then found that the comparative cost table obtained is misleading, as other cost items besides wages differ from one country to another. Then these differences are introduced as "modifications." In other words, one considers first the wage item alone in a somewhat artificial manner, namely by comparing the output of labour per day with the wage, leaving other cost items for later consideration. As a matter of fact they are often left out altogether. Even in Taussig's presentation they are unimportant guests invited to come later, with very little right to be present.¹

Another point under the general charge of cumbersomeness, also developed by Ohlin, is that the orthodox theory is an especially clumsy and even dangerous tool when more than two commodities or two countries are considered. Applied to such complex situations, the analysis becomes very involved indeed. The "simple" doctrine of comparative cost is incapable even of determining what commodities will be exported — to settle this problem, it is necessary to invoke international demand as well; for with the same table of comparative costs different commodities will be exported, according as international demands are assumed to vary. Danger arises from the fact that while most actual situations are of this complex sort, involving several countries and numerous commodities, and while the main line of orthodox reasoning applies specifically to but two countries and two commodities, yet the conclusions of this two-variable reasoning are often uncritically and unhesitatingly carried over to the analysis of concrete problems.

¹ Ohlin, *op. cit.*, p. 582. In the original, the last two sentences are in a footnote.

Perhaps the most convincing proof of the unwieldiness of the classical theory as a tool of explanation might be derived from an attempt to phrase a clear statement of the principles governing international trade. Suppose such an attempt were made. It would have to begin with a formulation of the doctrine of comparative cost, proceed to introduce reciprocal demand, and then, to become realistic, attach a series of qualifications to cover the problems raised by non-competing groups, by the presence of capital charges, by the existence of varying costs, and finally, by the fact that international trade is multilateral both as to countries and as to commodities. Quite clearly, to summarise in a single clear statement with even a remote degree of realism the findings of orthodox international trade theory is a downright impossibility. Added to the difficulties involved in the assumptions of the classical approach, its quite apparent clumsiness might well drive us to agree with an English writer, that "it seems better to follow the example of the Swedish economist, Professor Ohlin, and base our theory at the outset on modern conceptions of value."¹

To a consideration of such a more modern analysis we may now proceed.

SUGGESTED REFERENCES

Ohlin, Bertil, *Interregional and International Trade* (Harvard University Press, Cambridge, 1933), Appendix III.

Mason, Edward S., "The Doctrine of Comparative Cost," *Quarterly Journal of Economics*, Vol. 41 (1926), p. 63.

Williams, John H., "The Theory of International Trade Reconsidered," *Economic Journal*, Vol. 29 (1929), p. 195.

Angell, James W., *The Theory of International Prices*, Chapter XIV.

Bagehot, Walter, *The Postulates of Political Economy* (Putnam, London, 1885).

¹ Barrett Whele, *International Trade*, London, 1932.

CHAPTER V

INTERNATIONAL TRADE AND EQUILIBRIUM THEORY

BEFORE presenting the formulation of a theory of international trade constructed on more modern lines, it will be well to pause a moment and reconsider the nature of the problems requiring explanation. The classical theory was an attempt to answer two questions. First, how account for international specialisation and trade? — why are some internationally-traded goods produced in certain countries, others in other countries? Second, just what is it that governs the terms on which such international exchange of commodities takes place? Or in other words, what are the forces determining international prices? If the classical solution be rejected, on the ground that its assumptions are incapable of adequate modification or that its method is unnecessarily clumsy and unrealistic, a fresh attack upon these self-same problems is in order.

Rejection of the older theory imposes upon any new analysis one requirement at the very outset: namely, that it shall meet the criticisms upon which the rejection was based. Stated in positive terms, this means that what is wanted is a theory of international trade which is based on a thoroughly modern theory of value (instead of the discarded labor-cost theory), and which is direct and realistic instead of awkwardly round-about and unreal. Such requirements appear in large part to be met by the analysis furnished by the Swedish economist, Bertil Ohlin.¹ His reasoning is essentially an expansion of

¹ *Interregional and International Trade*, Cambridge, 1933. Another modern approach to international trade theory is that provided by Gottfried von Haberler (*The Theory of International Trade*, London & New York, 1936). His analysis also proceeds on the basis of the general equilibrium theory. It differs

the now generally accepted theory of value, the general equilibrium (or mutual interdependence) theory. As developed in the hands of Walras, Pareto, and Cassel, this theory has served primarily as an explanation of value relations in a single market. Without changing these principles, Ohlin has expanded their application to fit the case of numerous but interconnecting markets. This is precisely the situation raised by trade between nations or, for that matter, by trade between different regions within a single country.¹

Now while this approach is superior to the classical in that it begins with and carries out to their logical conclusion principles of value theory that, in whole or in part, are accepted even by neo-classical writers, it does not follow that it is simpler or easier of comprehension. The value theory on which it rests is far more complex than the simple labor-cost doctrine — complex, however, not because of any internal defect, but rather because the facts it seeks to explain are themselves involved. Though complicated, this new approach furnishes a far more adequate handling of its problems than the classical, which is inadequate chiefly because its foundations are too simple. Moreover, complexity does not necessarily involve cumbersomeness or unreality; the modern theory, indeed, makes possible a decidedly more flexible and realistic discussion of international economic problems than does the old.

Ohlin begins his analysis by considering certain characteristics of international trade which seem to furnish a logical point of departure. First of these is the obvious similarity between individual specialisation or division of labor and interregional specialisation in production. These two types of specialisation appear to be related phenomena. Now

from Ohlin's in being formulated in terms of opportunity costs and in being somewhat less comprehensive in scope. Chiefly because of its greater breadth and inclusiveness, I have chosen to follow Ohlin's presentation here.

¹ We shall follow Ohlin in discussing first interregional trade, then considering later the peculiarities of that type of interregional trade called international. This method serves to kill two birds with one stone and has the virtue of treating international trade as a special case of a more general type.

individual specialisation rests, in part at least, on differences in personal ability. Experience has proved it to be advantageous, in terms of total output, for individuals to specialise in production according to their aptitudes. Some people make better executives, some better craftsmen, and some better engineers or teachers than others. Both the total social income and individual incomes will be maximised if they follow the occupations for which they are suited. In an analogous way, different geographical regions vary as to their endowment with the productive agents. Some are plentifully equipped with fertile land, others with mines and forests, while still others are well supplied with capital and labor. Similarly again, it will be to the advantage of each region and of all together if, like individuals, they specialise in production, each one devoting its energies to the preparation of those goods for which its factor equipment is most suited.

Ranking with interregional variations in productive factor equipment as a basic economic fact is another fundamental datum: the immediate cause of interregional trade in goods is to be found in price differences. In other words, interregional (or international) trade is a price phenomenon.

These two observations suggest an obvious question: what relation, if any, exists between them? Are interregional variations in factor equipment and interregional differences in costs and prices in any way connected? The answer to this question should throw considerable light on the basic problems of international trade: the explanation of international specialisation, and the determination of international prices. In any event, the approach is both fresh and natural; to follow it should prove interesting.

To narrow our problem and bring it within manageable limits, it is necessary to make certain assumptions. As with all scientific investigations of complicated phenomena, this is essential; only by first applying an analysis to simplified conditions can any progress be made. The objection to the classical theory was not that it employed the step-by-step method, but rather that it took for a starting point a discarded

theory of value and later introduced qualifications which were inadequate to remedy this defect. It is hoped that the new approach, although adopting a similar procedure of simplification, will avoid these errors.

✓ We begin with the two observations just noted: (1) regions differ as to their endowment with the productive factors; (2) the immediate cause of interregional trade is the fact that commodity prices vary from region to region. The required simplification is established by the following assumptions:

(1) The factors of production will be regarded as perfectly mobile within regions, but immobile between them. (It may be remarked at this point that natural resources are in any event immobile in fact. If the other factors could move with perfect freedom between as well as within regions, then since they would have unlimited access to the choicest natural resources, the poorest of these would be deserted and the maximum possible production would be attained. The various industries would locate at the site of the best natural resources; standards of living would be equalised throughout the world.)

(2) All restrictions on the movement of goods will be ignored for the time being; this includes transportation charges and tariffs.

(3) Goods transactions alone will be considered; with equilibrium, exports will then exactly pay for imports.

(4) The factors of production will be assumed to be perfectly divisible; this proviso postpones the consideration of large-scale production.

(5) Qualitative differences in the factors in various regions will be ignored.

(6) Two regions alone will be considered.

(7) Each region will be supposed to possess a paper currency independent of all outside financial influences.

(8) The forces causing cyclical movements of business activity are assumed not to be operative, all disturbances of equilibrium tending to be self-correcting.

It will be noted that assumptions (1), (2), (3), (6), and (8)

are likewise found in the classical analysis. The remaining simplifications differ from the classical assumptions, notably (7), which presumes a regime of paper money instead of the narrower case of a purely gold currency. The classical provisions as to labor cost, constant cost conditions, two commodities instead of many, are notable by their absence.

Let us now examine the forces governing interregional trade under such simplified conditions. Clearly, it will be impossible for one region (A) to produce all commodities cheaper than another (B). Suppose A did have lower money costs for all commodities; then goods would move in one direction only, from A to B. Residents of B, having no means of acquiring money claims on A to offset her claims on B, would bid up the rate of exchange (the price of A's currency in terms of B's). A rise in the rate of exchange would raise the prices of all A's commodities against B. This process would continue until some of A's prices were higher than B's, when B would begin to export such products. Equilibrium would be attained when the rate of exchange was such that B's exports just sufficed to pay for her imports.

Only on the assumption that in the isolated state, before trade began, relative commodity prices were identical in A and B, could the result be different.¹ With identical relative prices, no trade could arise, for *ex hypothesi* neither region would have any price advantage. This point may be made clear by means of an illustration. Suppose that in both A and B the money cost of producing silk is three times, of rayon twice that of cotton. Relative prices of these sample commodities are then identical in the two regions — they conform to the ratios 3:2:1. Any rate of exchange that permitted either region (say A) to buy any of these goods cheaper in the other region (B) than at home would permit it to buy *all* of the goods cheaper to an equal degree. Hence A would

¹ The use of the term "relative" is obviously necessary, for in isolation (that is, with no trade and hence no rate of exchange) each region has an entirely independent system of prices. No means exists for expressing one such set of prices directly in terms of the other region's currency until a rate of exchange is established.

import all three. But having no means of paying for them, the rate of exchange would be bid up to a point where imports were as costly as home-produced goods, when trade would cease. A condition prerequisite to the establishment of interregional trade now appears. Relative prices in the two isolated regions must differ.

This conclusion naturally raises a further question: under what circumstances will relative commodity prices actually be different? It is at this point that the analysis ties up with the general equilibrium theory of value. Before considering the conditions under which interregional differences in relative commodity prices will exist, it will be well to devote some space to stating this theory of value; for it furnishes the starting point for all future reasoning and, indeed, constitutes an integral part of that reasoning.

As an introduction to this topic, a statement by Ohlin serves admirably:

The starting point for such an investigation [into the circumstances under which relative commodity prices will differ] is the fact that all prices, of goods as well as of industrial agents, are ultimately, in each region, at any given moment, determined by the demand for goods and the possibilities of producing them. Behind the former lie two circumstances to be considered as known data in the problem of pricing: (1) the wants and desires of consumers, and (2) the conditions of ownership of the factors of production, which affect individual incomes and thus demand. The supply of goods, on the other hand, depends ultimately upon (3) the supply of productive factors, and (4) the physical conditions of production . . . which are everywhere the same.¹

¹ Ohlin, *op. cit.*, p. 14. By "physical conditions of production," Ohlin apparently means only those of the most general sort, such as the fundamental laws of mechanics, atomic structure, and the like, for these are the only physical conditions which can be said to be "everywhere the same." These identical physical conditions, taken together with the prices of the productive agents, which differ from region to region, determine the technique of production in any area.

By "conditions of ownership of the factors of production," Ohlin means mainly the degree of concentration of wealth. A more even distribution of wealth would raise the incomes of the poorer classes, with important effects upon the demand for goods.

The demand for each finished commodity depends upon three factors, among which two elements at least are known: (1) the wants and desires of the consumers, (2) consumers' incomes, which in turn depend upon the conditions of ownership of the agents of production¹ and upon the prices of these agents, (3) the prices of all commodities. Now since in equilibrium the supply of each commodity will be equal to the demand for it, while its price will be just sufficient to cover its costs of production, the next step in analysis is to account for the costs of producing finished commodities. Clearly, the unit cost of producing each commodity will be the sum of a series of products (in number equal to the agents required) such as the following: the price of each productive agent needed for the manufacture of a single commodity unit, multiplied by the quantity of each such agent required. The quantity of each industrial agent required for the production of a unit of a single commodity is, furthermore, a function of (*i.e.*, depends on) the prices of all these agents. Factor prices, in other words, determine in what proportions the productive factors are combined.

The chain of relationships recedes one step farther — we must now explain the prices of the agents of production. Reflection shows that these prices are established by the interaction of the supply of the productive factors and the demand for those factors. Demand for each factor traces back to demand for finished commodities, while total industrial demand for any one agent is the sum of the quantities required in all industries. The quantity required in any one industry is the product of the number of units of finished goods produced and the quantity of this agent used to produce one such unit, while the number of units of finished goods produced depends upon the demand for such goods. But the demand for consumers' goods in part depends on incomes, which in turn are high or low in accordance with the prices paid for

¹ To avoid tiresome repetition of the same words, we shall use as synonymous the terms "agents of production," "productive agents," "factors of production," and "productive factors."

the factors of production. Likewise, the supply of these factors varies with the prices obtainable for their services, as does the quantity of any such agent required to produce a single unit of any good.

Thus it appears that the prices of commodities, the prices of the productive agents, consumers' incomes, the demand for finished goods, and both the demand for and the supply of the agents of production constitute a complex group of interacting and intimately interrelated forces, which, taken all together, mutually determine one another. To no single element in the total situation can causal priority be attributed; each exerts its influence simultaneously with all the others. This explanation of prices has been aptly characterised as one of mutual determination, or, alternatively, as a general equilibrium theory. If, in addition to the elements above assumed known (the wants and desires of the consumers, and the conditions of ownership of the productive factors), the supply of the productive factors be given, it is mathematically possible to formulate a determinate solution of the pricing problem.¹

The chief interest of the theory, however, does not rest in this mathematical possibility. It resides rather in the fact that, starting from an established and known price situation, the effects of a change in any element may — since we know the entire system of price relationships — be clearly traced through to their ultimate consequences. What we most frequently want to know is not so much the exact determining factors of a total present situation, but what consequences will follow when a change occurs at any point. For such a purpose, the general equilibrium theory of value provides a powerful tool of analysis.

Perhaps the meaning of mutual determination and general equilibrium may be made clearer by citing an analogy. The solar system is, for instance, equally with the price system, one of mutually determined equilibrium, in which everything depends on everything else. The position and motion of any

¹ A clear and excellent statement of this mathematical solution is given in Ohlin, Appendix 1.

single planet depends upon the simultaneous position and motion of the sun and every other planet. The movement of such a planet cannot be determined until every element in this complex situation is known, and all of these elements depend on one another. A simpler analogy is the one given by Marshall of a bowl full of steel balls, in which the position of each and every one is determined by the position of all the others, and *vice versa*.

We may now return to a consideration of the question: when will the conditions necessary to the establishment of interregional trade exist, which, as we saw, reduces to the further question, under what circumstances will relative commodity prices be different in isolated geographical regions? Clearly, if the productive agents are available in both regions in the same proportions, while the conditions determining the demand for goods are identical, relative prices of all commodities will be the same. Likewise, if there exists a difference in the supply of the factors which is balanced by an exactly compensating difference in demand conditions, the same result will ensue. These two statements come to the same thing as saying that if the relative scarcity of the agents of production is the same, relative factor prices and hence relative commodity prices (since these are derived from factor prices) cannot differ. Given, however, interregional differences in factor equipment not counterbalanced by exactly equalising differences in demand, and relative differences in factor prices will emerge. As a consequence, combinations of the factors will be dissimilar in the two regions, as will also the scales of relative commodity prices.¹

¹ Different relative factor prices could co-exist with equal relative commodity prices, but only on the assumption that the factors were used in the same proportions in all industries in both regions. If, say, because of physical necessity the factors were always applied in identical combinations, then commodity prices in the two regions would have identical relative scales, no matter how different were relative factor prices. This is due to the simple fact that equal multipliers are always equal multipliers.

As a matter of fact, if the relative prices of the productive agents were different in A and B, this fact in itself would be sufficient to cause producers in the two regions to combine them differently.

Thus, for example, in regions possessed of bountiful lands but supplied only scantily with capital and labor, land will be cheap, the other factors relatively dear. Consequently products which require rather large quantities of land but only small amounts of other factors, such as wool, wheat, or beef, will be comparatively cheap in such regions (*e.g.*, the Argentine, Australia, the western United States). On the other hand, in industrial districts, where laborers are numerous, capital plentiful, and land scarce, the first two factors will be cheap, the latter dear; manufactures will typify products calling for large quantities of the cheap and small quantities of the dear factors. As compared with the lands of the great open spaces, manufactures will be cheap, agricultural products dear (*e.g.*, England, Germany, Belgium, the eastern United States).

With such differences in relative factor equipment, commodity prices will vary interregionally; the basis for interregional trade is present.¹ Once a definite exchange rate is established, trade will begin, each region specialising in the goods it can produce cheapest. In the illustration given, *absolute* differences in factor equipment are especially prominent, because it is probable that in general such variations are more important in effecting *relative* differences in factor equipment than are differences in demand conditions. Loosely speaking, then, differences in factor equipment may be said to be the fundamental cause of interregional trade, provided we remember that such differences are *relative* to demand.

Given, then, the necessary basis for interregional trade in regional differences in the supply of the productive factors, it remains to discover what principles govern the actual content and terms of that trade. For diversity in the condi-

¹ Unless, of course, differences in factor supply are just offset by differences in demand conditions. But, as Ohlin has put it (p. 16), "There is no reason why demand in a scantily populated region should turn especially to goods requiring much land and little labour, say wheat, and thus prevent rent from being lower, relatively to wages, than in a densely populated region, where, as people cannot after all do without food, land is necessarily scarce."

tions of factor supply merely ensures that some commodities will be relatively cheaper in each of two regions; it is insufficient in itself to determine what particular commodities will be traded. To know this, it is essential that buyers in each region be able to compare the prices of home- and foreign-produced goods. Direct price comparisons, however, require either (1) the use of a common currency, or (2) the expression of two currencies in terms of one another by means of an exchange rate.

If both regions possess the same currency, the establishment of trading relations brings the demands of each region directly into contact with the price system of the other region. To the domestic demand for the products of the relatively cheap factors is added a "foreign" demand, while the domestic demand for the products of the more costly factors is directed toward imports. As a consequence of the impact of these reciprocal demands upon each of the two price systems, the scale of factor and therefore of commodity prices established in isolation will be somewhat altered, with eventual equilibrium attained when an equal value of goods travels in both directions.¹

Consider now the broader problem of commodity trade where each region possesses an independent paper currency. The change in this single circumstance affects, not the substantive results, but merely the process by which they are attained. The necessity of expressing one region's currency in terms of the other introduces another variable, the exchange

¹ It may be noted that just such an assumption of a common currency underlay our discussion of the comparative-cost doctrine. Adjustment to changes in reciprocal demands was presumed to take place through the operation of the price specie-flow mechanism, which may also, for the sake of simplicity, be assumed to apply to the present discussion. There is, however, an essential difference in the two cases. According to the comparative-cost doctrine, shifts in reciprocal demands have no effect on the basic scales of labor costs, but merely alter wage rates in a uniform fashion, and through wage rates, prices and the terms of trade. The analysis presented in this chapter, on the other hand, brings out the interdependence which exists between reciprocal demands and the basic cost conditions in each region. Changes in reciprocal demands cause changes in relative factor prices and therefore in relative costs. Cf. Ohlin, p. 23 n.

rate, which provides an intermediary through which reciprocal demands act upon prices in both regions.

Let us investigate the nature of the relationships between the exchange rate, factor and commodity prices, and reciprocal demands. Suppose that in each of the two regions, A and B, there are five factors of production, *a*, *b*, *c*, *d*, and *e*. A's currency unit is the pound, B's the dollar. One dollar will, when the two regions are isolated, buy in B a certain quantity of each of these factors. If the regions are differently endowed with the productive factors, the price in A of the *same quantity* of each of the five factors will vary from factor to factor; in other words, *relative* factor prices will differ. Such a situation may be represented by the second and third columns of the accompanying table, where B's price is \$1 for a certain amount of each factor, while the price in A of the *same quantities*

FACTOR PRICES AND THE EXCHANGE RATE

(1) Factors	(2) Price in B	(3) Price in A in £	(4) \$ Price in A at £1 = \$2	(5) \$ Price in A at £1 = \$3
<i>a</i>	\$1	£.2	\$0.40	\$0.60
<i>b</i>	\$1	£.3	\$0.60	\$0.90
<i>c</i>	\$1	£.4	\$0.80	\$1.20
<i>d</i>	\$1	£.6	\$1.20	\$1.80
<i>e</i>	\$1	£.8	\$1.60	\$2.40

is different for each factor. So long as A's relative factor prices are as given in column 3, factor (*a*) will — whatever the exchange rate — always be the cheapest of A's factors, and *a*, *b*, *c*, and *d* will always be cheap relative to factor *e*. But for the purposes of trade, not relative cheapness of the factors, but absolute cheapness in terms of a common currency unit, is what is important. Now, which A factors will be cheaper, reckoned in B's currency, than the corresponding factors in B, depends on what rate of exchange is established. A glance at the last two columns of the table shows this. At an exchange rate of £1 = \$2, factors *a*, *b*, and *c* are cheaper, factors *d* and *e* dearer (measured in dollars) in A than in B, while at a rate of £1 = \$3, only factors *a* and *b* are cheaper

in A; *c*, *d*, and *e* being now cheaper in B. With the \$2 exchange rate, A would specialise in producing commodities requiring large quantities of factors *a*, *b*, and *c*, but with the \$3 rate, she would concentrate on those requiring large amounts of only *a* and *b*; the opposite would hold of B. These "cheap factor products" would constitute the exports of each region.

So much for the exchange rate. Depending upon its level, different factors and commodities will be cheaper in each of the two regions. It is important to realise, however, that the exchange rate plays no independent part of its own — it is in no sense a final determinant of interregional prices and trade. Rather, just the opposite is true. The rate of exchange is merely an intermediary, itself subject to determination by a more basic force: namely, the state of reciprocal demands. It must be such that, given the conditions of factor supply, of domestic demand, and of demand for one another's products in each region, the value of exports and of imports is equal.

Suppose, for example, that in the preceding illustration an exchange rate of \$2 per £ were established. At this rate A's cheap-factor products might be so numerous and so low in price to buyers in B that their purchases would be very large, while the opposite would tend to be true of A's purchases of B's products. B's demand for A's currency, required for the purchase of the desired imports, would exceed the supply made available by exports. The rate of exchange (the price of £ in terms of \$) would be forced up, rising until it reached a level at which B's demands for A's products was matched by A's demands for B's products, *i.e.*, a level at which imports = exports.

If we now glance back at the ground covered, it becomes apparent that we have simply extended the general equilibrium analysis to include two separate trading regions. When isolated, each economic system is held in equilibrium by a complex set of demand-supply relationships. Given inter-regional differences in factor equipment (not counterbalanced

by exactly equalising differences in demand conditions), relative factor prices will differ. Commodity prices will be relatively low in each region for those articles in the production of which large quantities of the cheaper factors are required. Permit the establishment of some definite exchange rate, making possible a direct comparison of prices in the two regions, and the demand of each is brought into relation with commodity and factor prices in the other. A part of each region's demand shifts from domestic to foreign goods, thereby effecting changes in both price structures, which in turn react upon reciprocal demands. The exchange rate moves upward or downward as required to establish equilibrium in the trading relations of the two regions, a condition reached when they buy an equivalent value of goods from one another. In this final state of balance, no one element in the picture is to be regarded as a first cause, determining all the other elements. Again, we have a situation only to be described as one of mutual interdependence, in which the prices of factors and of commodities, the exchange rate, and the purchases by each region of the other's goods are mutually determined.

An important effect of the establishment of interregional trade, as well as some of the consequences which result therefrom, may now be indicated. As long as a region is isolated, its demand is quite self-contained, and impinges only upon domestic factors of production. Moreover, these factors are confronted solely with home demands. Once trade is established, however, commercial isolation ends and a fundamental change in demand-supply relationships occurs: the demand of each region enters into contact with the productive factors in every other region. One consequence of this is that the relative scarcity of factors will be different from what it would be under isolated conditions, a matter that will receive fuller consideration in the next chapter. Furthermore, the explanation of interregional trade is thereby increased in complexity. For it cannot be said that such trade is determined by the supply of the productive factors, nor yet by

their relative scarcities in each region alone (as created by the purely regional supply of factors over against regional demands). Reciprocal demand — the demand of each region for goods from other regions — must also be considered. Since the demand in a given region for any single commodity depends on the prices of all commodities and these in turn on factor prices, the same must hold of reciprocal demand; it is affected by the prices of goods and factors in all regions. Thus the price system (all the forces determining prices) of any given region is bound up with the price system in every other region. In the end, then, interregional trade must be said to be determined by all the forces affecting prices in each and every one of the areas between which trade exists.

Such a complete analysis, however, is not only difficult to grasp — it is altogether too unwieldy for constant use as an explanatory device. If every time it were desired to explain some phenomenon of interregional trade, the complete theoretical structure of general equilibrium had first to be stated in all its complexity, explanations would be few and far between, if indeed there were any audience with the patience to hear them. Consequently, though it is abundantly true that in economics, as Ohlin has put it, "everything depends upon everything else," it is also possible — if this fundamental be thoroughly appreciated — to answer problems in simplified form, with emphasis upon their most significant aspects. Such answers, though never theoretically complete, may be adequate for their immediate purpose. Bearing it in mind, then, that the price systems of all trading regions are related to one another by reciprocal demands, we may say that interregional trade may be explained in terms of certain essential principles. First, differences in the relative scarcities of the agents of production give rise to dissimilar scales of relative commodity prices. Second, such relative price differences are translated into absolute price differences upon the establishment of a rate of exchange. It then becomes evident in which commodities each region will specialise. Third, the level of the rate of exchange and the

value of interregional commodity trade is determined by reciprocal demand.

We may even go further in simplification if we take for granted the part played by the exchange rate and reciprocal demand, and say that the primary condition underlying inter-regional trade is the existence of differences between regions in the supply of the productive agents. From a broad point of view, varying productive-factor equipment may thus be regarded as the fundamental cause of interregional trade and specialisation. One region, owing to geographical or historical causes, may be abundantly endowed with certain factors while but scantily supplied with others; another region may find itself possessed of the same productive agents, though in quite dissimilar proportions. Relative abundance will mean (unless offset by an exactly compensating difference in demand conditions) relative cheapness, not only of the abundant factor, but of commodities in whose production large quantities of the cheap factor may be effectively used. Once an exchange rate is established, each region will specialise in the production of those goods for which its factor equipment specially suits it, and will exchange such goods for the favored products of the other region. Abundance or scarcity of the productive agents is the basic fact, and, if we remember the qualifying conditions, these terms may be substituted for "cheapness" or "dearness."

This condensed version of his theory is well stated by Ohlin in terms of an illustration:

Australia trades wool and wheat against manufactures, because the former products require much land of grades to be found in large quantities in that region, whereas manufactures require large quantities of labour and certain gifts of nature, e.g., coal and iron mines, which are scantily supplied in Australia. Thus, certain grades of land are exchanged for labour and for other grades of land. Strictly speaking, Australia will export goods containing much land not because land is abundant, but because land will be found to be cheaper there than in other regions when trade has started. But this evidently comes to very much the same thing, only if demand conditions were so peculiar that

land — in spite of the abundant supply — would not be cheaper than in regions with a scanty supply, could circumstances be different. Failing such extraordinary demand conditions, we can say that trade implies an exchange of abundant factors for scantily supplied factors.¹

Further illustrations may serve to point the theory, as well as to show its direct applicability to the facts.² Maine, for example, is a great potato-growing region, owing largely to the fact that that state is possessed of an abundant supply of rather mediocre land, while the population is too sparse for intensive farming or a high development of manufactures, even were other conditions favorable. With a considerably denser population and more fertile land, Wisconsin, on the other hand, has become a large producer of milk, butter, and cheese, commodities whose production calls for rather considerable quantities of labor.

Denmark occupies, in the international field, a position similar to that of Wisconsin in the United States. Deficient in natural resources other than land, but with a relatively large population for her area, she has become the leading European producer of dairy products. Ireland, too, is in a comparable position.

As an example of regional specialisation resting almost entirely upon a plentiful supply of a single natural resource, the oil industry of Oklahoma, Texas, California, Mexico, and Persia may be cited. In still another line of production, the manufacture of oriental rugs, Persia has for different reasons developed considerable exports. Her advantage in this field rests upon cheap wool, obtained from her barren highlands, as well as upon the presence of a large number of highly skilled workers practicing a traditional and extremely difficult craft. (It is interesting to note that the imitation article, produced in New Jersey, is sometimes sent to its American market *via* Persia, in order to give it a ring of authenticity. As a competing though different product, its

¹ *Op. cit.*, p. 30.

² A number of excellent illustrations are given in Ohlin, pp. 23-29. Others may be found in almost any economic geography.

ability to compete is based not on an abundant skilled labor supply, but on cheap capital, as well as technical and unskilled labor.)

Note should also be made of the fact that in many instances, different countries use different combinations of the productive agents to produce the same commodity, the two technically and geographically different sources of supply competing in neutral or even in one of the producer's markets. Thus Canadian, Australian, and American wheat, produced with much land and little labor, competes in Great Britain with local supplies produced under conditions of intensive cultivation. The case of genuine and imitation Persian rugs is similar to this situation, although the two products are by no means identical. American automobiles, the product of large-scale methods, compete in neutral markets with the output of the less mechanised plants of England, France, and Germany.

Additional illustrations of the bearing of abundance or scarcity of the productive agents on the course of interregional trade might be cited almost without limitation. This, however, is a task which may well be left to the reader as a useful exercise.

NOTE ON THE ASSUMPTION OF GOLD STANDARD CONDITIONS IN THE CLASSICAL THEORY

The classical analysis of international trade begins with a comparative-cost situation which reflects the relative effectiveness of labor, and which gives a range of possible barter terms of trade. Reciprocal demand determines the actual terms.

These constitute the main elements of the classical theory. The introduction of gold movements and of money wages is something of an afterthought to provide a mechanism by means of which the effects of changes in reciprocal demands may be traced. According to this mechanism, a variation in reciprocal demand alters the barter terms of trade *by means of* gold flows and changes in the level of wages.

The classical writers could equally well have assumed paper currencies. An initial position of the barter terms of trade would then be consistent with one particular exchange rate, that which

brought about equality in exports and imports between the two countries involved. A change in reciprocal demands, instead of causing a rise in money wages in one country, a fall in the other, would lead to a variation in the exchange rate such that equality of exports and imports was preserved. This rise in the exchange rate would have no effect on wages or the prices of goods *within* the countries, but it would raise the price of foreign labor and of imports in the currency of the country whose demand had increased, lower the price of foreign labor and of imports in the other country.

Labor being the only cost considered, and non-competing groups of labor being ignored, variations in exchange rates could only produce uniform vertical changes in costs to each country of the other country's goods, exactly similar to those discussed by classical writers in terms of gold flows. Failure to take into account other costs than labor would continue to prevent a realistic and theoretically consistent approach to the problems of international value and of international specialisation. Consideration of the effects of changes in reciprocal demand (and other international changes) upon the different sources of incomes and thus upon the distribution of wealth would also continue to be impracticable.

SUGGESTED REFERENCES

Ohlin, Bertil, *Interregional and International Trade*, Chapters I-IV, Appendices I and II.

Haberler, Gottfried von, *The Theory of International Trade*, Chapters XI-XII.

Angell, James W., *The Theory of International Prices*, Chapter XVIII.

Whale, Barrett, *International Trade* (Thornton Butterworth, London, 1932), Chapter V.

CHAPTER VI

SOME MODIFICATIONS AND CONSEQUENCES OF THE THEORY

IT may be remembered that the preceding chapter's analysis of the causes of interregional trade began by calling attention to the similarity between the particular aptitudes of individual human beings and the differing factor equipment of various geographical regions. These distinguishing characteristics of dissimilar producing units (the individual and the region) might both be classed as aptitudes, those of the individual taking the form of varying degrees of certain human qualities, those of the region of varying quantities of essentially dissimilar factors. In both instances, possession of different aptitudes by various producers supplied the basis for specialisation and the exchange of goods. (Individuals obtained larger incomes if they applied themselves to those tasks for which they were best qualified by nature and afterward exchanged their output for the products of other specialised producers.) Regions likewise were economically benefited if they produced and traded with other regions those commodities for whose production their factor endowment or aptitude most fitted them.

ECONOMIES OF LARGE-SCALE PRODUCTION AS A BASIS FOR INTERREGIONAL TRADE

The parallel may be extended along another line. Even though individuals were identical as to natural ability, it would still pay them to specialise, for concentration upon a single task permits the acquisition of much greater skill, while it also eliminates the time wasted in changing over from one task to another. In a similar fashion, regions identical

as to productive factor equipment would still have a perfectly valid reason for specialising and trading, owing to the fact that production for more than a purely domestic market permits organisation on a more economical scale, *i.e.*, permits an acquired superiority to be developed. Were each region or country completely isolated — a condition closely approximated, indeed, in certain regions during recent years — all commodities whose low costs of production depended upon large-scale manufacture for a broad international market would have to be produced locally under conditions of high cost. The high prices of automobiles in European countries today are largely to be attributed to the enforced small-scale production resulting from high tariff barriers.

The chief cause of the economies of large-scale production is to be found in the lack of divisibility of certain of the productive agents. If each of these agents could be divided into units of any desired size without loss of efficiency, then while there would still be an ideal or "optimum" proportion for combining them, depending upon their prices, the total size of any such combination would be a matter of indifference. Expressed more concretely, this means that if such large and expensive modern machines as power drills, presses, automatic conveyors, and harvesting combines could be supplied in miniature, or in lighter and much less costly form, the present degree of intensive specialisation could be maintained in small factories with output but an insignificant fraction of that of huge modern establishments. (Where man-power was concerned, it might be necessary to resort to part-time employment of certain types of labor.) The nature of the productive factors, or, in some cases the materials worked upon, naturally does not permit such small units to be employed. To punch holes in sheet steel, a heavy, powerful, and expensive machine, *i.e.*, a large unit of capital, is by the very nature of the operation essential. Without the possibility of a large volume of output, big and expensive productive agents cannot be fully — and hence, economically — employed.

Consequently it may be said that because the factors of production cannot be divided at will, because they come in packages of a technically predetermined size, certain economies of production cannot be realised except in combinations of the factors of considerable magnitude. Moreover, these large-scale combinations can only be adopted when the market for their products is broad enough to allow full utilisation of plant. There would be no point to introducing expensive machinery in a factory whose output was so small that to absorb the costs of the machinery, unit cost would have to be raised above the level attainable by simpler, more direct, less specialised methods.

It is clear that if the factors of production were perfectly divisible, there would be no peculiar advantage to the organisation of industry on a large scale.¹ Small plants could under such conditions achieve all the economies of larger firms. So far as the theory of interregional trade is concerned, all would take place as outlined in the previous chapter, with no qualification required on this score. Owing, however, to the actual lack of divisibility of the factors, economies of large-scale organisation appear. They create an additional basis for interregional trade.² Two regions with identical relative prices may well specialise in producing goods whose purely domestic market is too small to permit large-scale operations to develop. Though theoretically lack of divisibility of factors is a possible independent cause of trade, in actual fact, identical sets of relative prices are so unlikely to exist in different regions that this may be regarded rather as a supplementary basis for interregional exchange.

If we suppose certain regions with identical relative factor equipment to begin, quite by chance, to specialise in large-scale industries, two important repercussions of this initial

¹ Lack of divisibility lies at the basis of most economies of large-scale production, such as the use of expensive equipment and of high-priced executives, and the maintenance of a large research department. The economy of large-scale purchases, on the other hand, seems to be of a slightly different character. Raw materials, etc., may be bought in almost any quantities desired. The best price, however, can frequently be obtained only on large orders.

specialisation may be noted: the demand for the factors of production will differ from the demand in isolation, thereby inducing differences in factor prices. Altered factor prices, in turn, will give rise to "supplementary" industries using large quantities of what have now become cheap factors.

*NUMEROUS REGIONS

Having indicated the correction in the theory required by the fact that productive factors are not perfectly divisible, we may now proceed to consider what further qualifications are needed to bring our assumptions (pp. 89-90) into line with economic reality. The simplest of all to deal with is the one confining discussion to two regions. Any number thereof may be included in the analysis without in any way altering its conclusions or its methods.¹ The sole effect is to increase the complexity of the reasoning, and as a consequence, as Ohlin says, to "make it more difficult to say *a priori* of any one of the productive factors or commodities that it will be cheaper in a certain region than in the others when trade has been opened."

DEFINITION OF AND QUALITATIVE DIFFERENCES IN FACTORS OF PRODUCTION

Considerably more difficult to handle is the proviso which permitted us to ignore qualitative differences in the productive factors. The usefulness of this assumption in simplifying the argument is not to be doubted; it enabled us to make inter-regional comparisons of the quantities and prices of productive agents without stopping to inquire whether the agents whose prices and quantities were being compared were actually the same. Now the necessity of such an inquiry at some time or

¹ It is interesting to recall how the classical theory, when it came to deal with more than one country, not only became more involved, but also found it necessary to change its earlier conclusions, *i.e.*, reciprocal demand became a determinant of the very course of trade as well as of the actually realised barter terms of trade.

other is apparent. For unless the comparisons we make relate to the same things, any conclusions we may draw will be vitiated, unless it is possible to justify them on quite independent grounds.

Before considering the problem of qualitative differences in the factors of production, it would seem logical first to decide just what a productive factor is. In the foregoing chapter, we confined our attention to the conventional division of the factors into land, labor, and capital. This approach suffices for a first approximation, where only a broad, general treatment of interregional or international trade is desired. There is no question, however, but that specialisation and the movement of commodity trade is influenced, not only by the relative abundance of land, labor, and capital, but also by relative differences in the supply and therefore in the prices of specific kinds of each of these major groups of factors. A country possessed of an abundance of skilled labor, for example, will tend to attract industries in which such labor is important (notably the handicraft industries), while a country with abundant unskilled labor but scarce and expensive skilled workers will tend to develop a very different industrial structure.

Taking the broad tripartite division of the factors into land, labor, and capital as a point of departure, let us inquire as to the extent to which each of these must, for purposes of more accurate analysis, be separated into distinct sub-factors. We may begin with labor.

(a) *Labor.* — Just as the three major factors are distinguished by the fact that each is suited to the performance of a different type of function in the process of production, so different grades of labor may be marked off from one another in terms of their varying suitability for different productive operations. Unskilled labor performs different tasks from skilled labor; the labor of the electrician is technically different from that of the carpenter.

Again, as with the broad categories of factors, it is not the technical fact that these different types of labor are capable

of performing certain productive tasks that gives them their *economic* importance, but rather their scarcity relative to demand. For labor as a whole, this is determined by the size of the working population. The relative scarcity of the various groups, on the other hand, depends upon two basic considerations: heredity and environment. The particular technical efficiency required in any such group rests partly upon inherent human traits, such as intelligence, physical strength, and certain natural aptitudes, and partly upon habits acquired as a result of training. Where the capacity to perform a given type of function depends on the possession of natural ability, little movement from one category of labor to another can take place. The size of any particular group will be limited by the numbers of those in the total population who have inherited the requisite traits. On the other hand, to the extent to which any particular technical proficiency can be acquired through education or training, movement from one labor group to another may occur.¹

The degree of inter-group movement, or the mobility of labor, depends upon a wide range of circumstances — facilities for education, the general level of incomes in a community, its social traditions and laws, trade union policy, etc. Depending upon the nature of these environmental conditions, movement from one non-competing group to another will be comparatively free or decidedly restricted (e.g., as under the caste system of India). The mobility of labor in any community, in other words, determines how competitive its various non-competing groups will be. Since these inter-group movements, by changing the relative scarcity of the different kinds of labor, also alter relative rates of pay, variations in relative wages provide a criterion for judging the permanence of non-competing groups.

A moment's reflection will show that the permanence or

¹ In this respect, the factors constituted by the various groups of labor differ from the three basic factors, land, labor, and capital. These are relative to one another, immobile, whereas some degree of mobility characterises the labor sub-factors.

stability of any non-competing group will vary with the period of time under consideration. So far as the technical qualifications of different strata rest on underlying differences in native ability, their relative numbers and their relative rates of pay will tend to remain stable over long periods. This would appear to be true of such rather broad divisions as unskilled, skilled, and technical labor. Very different degrees of intelligence and other types of natural ability are called for in these three main divisions. Mobility between them is very imperfect; therefore wage differences tend to be large and enduring. On the other hand, the technical requirements of sub-groups within each of these main categories (*e.g.*, plumbers, carpenters, and electricians, among the skilled group) would seem to be substantially the same in their general nature. The various special skills can be acquired by members of the skilled group within a relatively brief time. Therefore substantial wage differences between such sub-groups as these will tend to be of comparatively short duration. Indeed, we may use the persistence of wage differences as the basis for defining a non-competing group, which may be said to exist so long as its members receive a wage substantially different from that paid to other groups of comparable technical requirements.

It should be apparent that in the various non-competing groups of labor we now have a basis for distinguishing separate labor factors of production. Each non-competing group constitutes, for purposes of interregional comparison, a separate factor. These clearly have an important bearing on interregional trade, since for a region possessing, for example, skilled labor in abundance, this will constitute a cheap factor and will attract industries requiring it in relatively large quantities. Moreover, just as the number of distinguishable non-competing groups varies with the period of time under consideration, so likewise will the number of separate labor factors taken into account in an interregional comparison. For most purposes, a classification into the three main groups — unskilled, skilled, and

technical labor¹—will suffice. (Provision must generally be made, however, for two special sub-groups in the unskilled class, namely the labor of women and children, whose wages are ordinarily low in proportion to their productive efficiency.²) Where short-period changes are under consideration, the number of labor groups may be as large as the number of distinguishable wage scales. A scarcity of managerial labor may for some years hamper the development of large-scale enterprises, even though engineers and other types of technical labor are plentiful. In the course of time, however, the attraction of high earnings of management should correct such a situation. Where the problem is one of long-run tendencies of international trade, temporary wage differences may generally be ignored; consideration of the three major types of labor, together with such special sub-groups as are marked by persisting wage differentials, will be sufficient.

Having found a basis for determining the number of separate labor factors to be taken into account, we may now return to the problem of qualitative differences. (It is obvious that if the supply of a productive agent in various regions differs as to quality, commodity costs of production are bound to be influenced.) As the classical writers pointed out, the effectiveness of labor is quite as important in determin-

¹ This is the classification adopted by Ohlin, who says, "The second group comprises mechanics, foremen, office clerks, etc., while the third represents the technical and administrative leadership required in production." *Op. cit.*, p. 71.

² Ohlin also cites, as special sub-groups of unskilled labor of rather enduring significance, the labor of blacks and whites in South Africa, and negro as compared with white labor in the southern United States. As an example of a more temporary unskilled sub-group, foreign immigrant labor in the coal and steel industries in the United States before the war may be mentioned. In the first decade or so of this century, when the annual inflow of immigrants was close to a million, this was an especially large and cheap sub-factor. With the continuation of the post-War restrictions on immigration, and finally, with the successful organisation of the major portion of the steel industry by the C. I. O., the existence of submerged non-competing groups in steel and coal has been brought to an end.

Particularly interesting examples of skilled labor sub-factors are those non-competing groups created by the closed-shop policy of strong trade unions, which persist as long as the unions maintain their strength.

ing the price of a commodity as is the wage paid. Just because the relative supply and relative wages of unskilled labor are the same in two regions, it does not necessarily follow that one of these regions will be unable to produce more cheaply those products in which unskilled labor is important. If this labor were suited to the performance of quite different tasks, or if its efficiency at the same kinds of work were dissimilar in these regions, costs of production would inevitably be affected. (Likewise, the advantage derived by one region from a large and cheap supply of unskilled labor might be entirely or partially offset were the factor in question qualitatively inferior in that locality.)

How can this problem of qualitative differences in supposedly identical factors best be handled? The simplest and most direct solution is to treat a factor which is superficially the same in two regions (*e.g.*, unskilled labor) but characterised by great differences in quality as really two different factors. (This is merely to recognise the patent fact that low-paid, inefficient labor is not the same thing as well-paid, efficient labor.) Thereby the difficulties inherent in the comparison of dissimilar things is avoided by simply refusing to compare them. Thus because "native labour in the colonies may do better than the white population, when it comes to manual work in a warm and moist climate, while white labour is as a rule more efficient in almost all work in a suitable climate,"¹ these two types of labor (of the same grade) must be regarded as quite distinct labor factors, incapable of direct comparison.

At first sight, this may seem to rule out all possibility of making interregional comparisons of *any* labor groups, for nothing is more certain than that national and even regional labor sub-factors differ in varying degree from place to place as regards education, intelligence, strength, or some other of the numerous qualities affecting their usefulness. Such a drastic conclusion is, however, hardly warranted. For differences in these qualities are attributable to one or

¹ Ohlin, *op. cit.*, p. 79.

the other of two great influences: heredity and environment. It follows that qualitative differences in labor will be greatest where these two sources of variation differ most markedly: namely, between regions where racial or cultural dissimilarity is sharpest. 'Races and cultures are most unlike in the advanced and in the backward countries of the world; hence in comparisons of factor equipment between such regions it would be necessary to treat many if not most labor factors as essentially different species.' Again using unskilled labor as an illustration, Java would be regarded as having a large supply of native unskilled labor, but little or no white labor of this class, while England, with abundant white workers, would be said to be entirely without a supply of "native" labor. The number of factors considered is increased somewhat by this method of handling qualitative differences, and the analysis is thereby rendered more complex, but its validity as a theoretical tool remains unimpaired.

Between the more advanced countries possessing a common racial and cultural background, diversity in the quality of labor will naturally be much less marked. Even here, however, differences may be sufficient to affect materially the productivity of the workers. A thorough examination of the forces determining trade cannot ignore this element, though it is probable that quantitative rather than qualitative differences in the labor supply will be of predominant importance. Frequently, indeed, the greater productivity of a particular labor group in one country will turn out, on inquiry, to be due more to the abundance of cooperating factors (rich natural resources, large-scale — *i.e.*, capitalistic — methods of production) than to the possession of unlike traits by the laborers themselves.

An American worker in a cotton mill produces more than an English worker, at least in the lower grades of goods; the superiority of the English over the Italian is perhaps still greater. But an Italian immigrant in the United States will, after adapting himself to the new conditions, produce more than the English worker in an English mill and probably as much as his English

and American fellow workers in the American mill. To account for this by a change in his qualities does not seem practical; a much better way is to classify all individuals as belonging to the same labour group, if under similar conditions as regards machinery and organisation they are found to be fairly equal in efficiency, disregarding of course minor individual differences.¹

(b) *Natural Resources.* — With this extended discussion of labor factors behind us, we may now turn to a decidedly simpler category: natural resources. Following Ohlin, five main classifications of resources may be noted: (1) agricultural and forest, (2) fishing and hunting, (3) mineral, (4) water-power, and (5) transport, though for the sake of inclusiveness perhaps there should be added (6) manufacturing and building sites. For broad purposes, especially in a preliminary comparison between regions, each classification may be presumed to be made up of essentially similar units. In fact, of course, each group is really a number of different resources similar only in a general way. (Land, for instance, is of many varying degrees of fertility, though each grade is suitable for farming uses. Different plots of land likewise vary as to their desirability for industrial or commercial sites, though all parcels may be used for these same general purposes.) Where a more refined and exact comparison is desired, each major group may be subdivided into as many sub-groups as seems economically relevant. That is, when the supply of some given type of natural resource exhibits such great qualitative differences between regions as to affect costs of production to a significant degree, each regional supply should be treated as a distinct factor. Thus Swedish iron ore and German ore should be regarded as different productive agents, since the Swedish deposits are so much richer; the same is true of farming land in New England and the Middle West, because of differences in fertility.

(c) *Capital.* — Turning now to capital factors, it should be noted at the outset that it is differences in the rate of interest that cause various regions to use capitalistic or round-

¹ Ohlin *op. cit.*, pp. 79-80

about methods of production to a greater or less degree, and that interest is paid for supplies of free, floating capital, available for embodiment in concrete capital goods. Large or small quantities of these concrete types of capital equipment, in other words, are a *result* of the abundance of financial resources, of money savings, so that comparisons of capital resources should apply to capital in the abstract, to financial resources available for investment.¹ Of capital in this sense, two main divisions may be distinguished: short-term, free to be invested only for short periods, and long-term, available for long or even indefinite periods. Each of these categories may be further subdivided into "safe" and "risky" capital, each, of course, paying a quite different rate of interest, that for "risky" capital including a considerable element of compensation for the risk incurred. That countries differ as to available supplies of these varied kinds of capital is evident. France, as Ohlin points out, possesses abundant "safe" capital, the supply of "risky" capital being rather more plentiful in England, and most abundant of all in the United States.

SOCIAL CONDITIONS OF PRODUCTION

It is convenient at this point to introduce a further consideration with respect to the risk element. Attention has been called to the fact that there are regional differences in the supply of capital (and for that matter, of labor as well) willing to go into hazardous industries. The *same* industry, however, may be more risky in one country than in another, owing to differences in what may best be called "social conditions of production." This aspect of risk is quite distinct from the abundance or scarcity of factors willing to enter risky enterprises; it is an independent element in the total

¹ Any country can acquire capital equipment of the most up-to-date sort — by importation, if necessary — though it may not pay it to do so if it has to borrow the wherewithal, free capital, at a high rate of interest. The possibility of borrowing from countries with plentiful capital does not mean that it can be had at the rate of interest current there. The higher rate ruling in the borrowing country must be paid.

industrial situation, affecting all industries, but especially those requiring stable conditions. Social conditions of production relevant to this problem include such phenomena as stable or unstable governments, the danger of war, the level of business ethics, and similar rather intangible matters. Thus large-scale plants, involving a heavy capital investment, are rarely found where political stability is frequently upset by revolutions; agriculture is more suited to such an environment. Ohlin cites as an illustration of the influence of the danger of war a differential of 9 to 12 per cent in 1926 in the interest charges paid by first-class firms in the Baltic countries adjoining Russia over the interest paid by the same firms for capital invested in the Scandinavian countries. Such "social conditions of production" constitute the framework of every region, within which all types of industrial activity must be carried on. As any one or a number of these conditions may be expected to affect various industries to a different degree, the course of development of a region's industries will naturally be influenced. This makes it essential, in making interregional comparisons, to take this matter of "social conditions of production" fully into account.

Up to this point in the argument, three of the original simplifying assumptions have been disposed of: the provision that all factors are perfectly divisible, that only two regions are involved in trade, and that factors are everywhere qualitatively the same. Of the five remaining assumptions, one, to the effect that only transactions in goods are involved in interregional trade, will be covered in part when the interregional mobility of factors is introduced. For a full discussion we must wait until the subject of the balance of payments is taken up, when all the items entering into the international accounts will be examined.

✓ PAPER VS. GOLD CURRENCY SYSTEMS

Of the supposition that each region possesses an independent paper currency, a few words may now be said. As a matter of fact, this proviso would be valid for much of the

international trade of the last twenty years. It does not, however, cover the case of gold standard countries. The essential difference between trade under the paper and under the gold standard may be briefly stated, leaving the details for later consideration. It amounts to this: under the paper standard, the rate of exchange is free to fluctuate, and the rate finally arrived at, the equilibrium rate, must accurately reflect conditions of reciprocal demand. If this demand changes in any way, adjustment is brought about through changes in the exchange rate itself. Under the gold standard, on the other hand, the rate of exchange is fixed within very narrow limits. Adjustment to changing demand is more complicated, but provisionally we may say that it takes place along the lines of the price specie-flow mechanism, through movements of gold and their effects on prices. When we come to the question of the mechanism of adjustment, in later chapters, both the paper and the gold case will be more fully discussed.

The assumption that the factors of production were perfectly mobile within regions, but immobile between them, and the neglect of restrictions on the movement of goods, the most important of all our assumptions, remain untouched. Before considering these themes, however, it is essential to acquire some understanding of certain of the effects of interregional trade. Consequently, we now introduce a brief digression on that subject.

✓CERTAIN EFFECTS OF INTERREGIONAL TRADE

(a) *Equalisation of Commodity Prices.* — Most obvious of all the effects of trade is its tendency to equalise commodity prices. This equalisation will be perfect if no obstacles to trade exist; that is, commodity prices will be identical in all regions. Moreover, all commodities will be exported or imported; none will be produced locally. Since obstacles do stand in the way of trade (to mention only transport costs and tariffs), this price equalisation can never in fact be perfect.

The prices of traded goods tend, however, to differ only by the costs of overcoming these obstacles.

(b) *Equalisation of Factor Prices.* — Trade also promotes the equalisation not only of commodity but also of factor prices. The commodities traded are characteristically the products of the most abundant factors of each region. Thus trade adds to the domestic demand for these factors a foreign demand; other things equal, their prices will be higher than in isolation. Moreover, factors scarce in any region will be met with a reduced demand, since their products will be imported from regions in which they are relatively more abundant. Prices of scarce agents will fall. (Interregional trade, by raising the prices of abundant factors and lowering those of scarce ones, brings them more into line with factor prices in other regions where the supply situation is different. Factor prices in different regions tend to become more equal.) Put in another way, the *relative scarcity* of the agents of production is made less different.

One might conclude that complete equalisation of the prices of the various productive factors would result. This, however, is highly improbable if not impossible. It could only occur if the demand for the various kinds of labor could be concentrated largely on those areas where each kind was most abundant, thereby raising wages there to a parity with wages in scarce-labor areas. Likewise, the demand for land would have to be concentrated on abundant land areas, and the demand for capital on districts well supplied with capital. Such a wholesale localisation of demand is, however, quite impossible, owing to the technical requirements of production, which in the case of practically all commodities calls, not for labor, land, or capital alone, but for combinations of all three of these major groups of factors. Complete equalisation of factor prices would require an unattainably perfect adaptation of demand to the highly varying local supplies of the different agents. Moreover, did any such price equalisation occur, it would contain the seeds of its own destruction. For when all factor prices were every-

where the same, there would no longer be any reason for trade, and with the cessation of trade, and therewith the extinction of the demands which brought about the price equalisation, the original disparities in factor equipment would immediately reassert themselves.

(c) *The Gain from Trade.* — A third and most important consequence of interregional trade is that it makes possible a much more efficient use of the factors of production than would otherwise occur, thereby raising their real incomes. This, indeed, is the chief gain from trade. Factors which in isolation would be most unproductive of certain needed commodities may nonetheless by means of trade yield these required articles in abundance. Each region can devote its factors to their most efficient uses, exchanging part of their output for goods produced more efficiently elsewhere. Thereby all regions benefit from geographical specialisation by acquiring a larger real income.

The highest average level of incomes throughout the world would be attained were it possible everywhere to combine the factors in their most productive proportions. In a world whose various regions are very differently endowed with the agents of production, however, this outcome could only be realised if it were possible to move these agents from regions where they are abundant to those where they are scarce. This outcome is prevented, of course, by the immobility of certain factors, notably natural resources. The next best thing to moving the factors is to move their products, and this trade permits. Scarcity of certain agents in one region is compensated for by utilising them at a distance, where they are abundant — that is, by importing their products. (Looked at in this way, exports and imports of goods are in effect an indirect export and import of the factors used to make them.)

(d) *Effects of Trade on Demand.* — An effect of trade of quite a different sort is to be seen in the influence it exerts on the demand for commodities. On the one hand, owing to the fact that incomes are raised, the quantitative volume of de-

mand is increased. On the other hand, the direction of this demand, its qualitative makeup, is also altered. For trade acquaints us with a wider range of goods than we could possibly know in isolation — our tastes and desires are themselves affected. Were it not for international trade, the American national drink might be Postum instead of coffee; without the possibility of importing cinema films, the British would never have known the manifold delights of Hollywood. (Their ideas about America would certainly be different, and perhaps more accurate.)

(e) *Tendency to an Increase in Regional Differences in Factor Equipment.* — We have already seen that trade tends to raise the prices of factors abundant in a given region, and to lower the prices of scarce agents, thereby bringing about some degree of interregional price equalisation. But this result has further consequences, provided the supply of the factors reacts to the changes in their prices. So far as higher prices for the more abundant agents effect an increase in their supply, and lower prices for the scarcer factors cause a contraction of supply, *interregional differences in factor equipment are still further increased.* Our knowledge of these reactions is limited — it is impossible to say *a priori* that the supply of any factor will always respond positively to a change in its price. As regards labor, it seems fairly certain that a rise in the wages of *any* one labor group (e.g., skilled labor) relative to the wages of other groups will stimulate an increase in *its* supply. Even here, however, the effect upon the *total* supply of labor is uncertain; higher wages for skilled workers may cause fewer of their wives and children to seek work. And when a general rise in the real wages of all labor is involved, the outcome on the supply side is quite indeterminate. It depends, among other things, upon the attitude of the laboring population toward leisure as compared with higher real incomes, toward a better standard of living as compared with earlier marriages and larger families.

Of natural resources, one might be inclined to say that price changes cannot alter their supply, that this is given once

and for all by nature. There are, however, three ways in which the supplies of natural resources *economically available* may be increased. Higher prices may stimulate additional discoveries; they may lead to the reclamation of unused resources (e.g., through irrigation and drainage); or they may encourage the investment of additional capital to exploit more rapidly or cultivate more intensively resources already in use.

With regard to the response of capital supply to changes in the rate of interest, it is impossible to give a clear and unequivocal answer. At a *given* level of income, it is probable that a higher rate of interest would stimulate an increase in savings, a lower rate a decrease. A rise or fall in the interest rate, however, retards or accelerates the rate of investment, thereby raising or lowering the general level of production and of incomes: The whole subject is bound up with the theory of the business cycle, which it is beyond the scope of this book to discuss.

(f) *Broader Effects of Trade.* — But trade affects far more than the prices of the factors of production and the quantities thereof made available: it determines to a very considerable degree the quality of labor, the nature of the concrete forms of capital, and the type of natural resources exploited. Were the various regions of the world isolated from one another, forced by this isolation to be self-sufficient, and thereby limited to producing for a narrow market, specialisation and the division of labor could be utilised only to a small degree. The intricate, highly-organised industrial societies of today would simply not exist; everything would be more primitive. Without broad markets, large-scale production would be impossible. Without large-scale production, most of the technical developments of the last hundred and fifty years, embodied in elaborate capital instruments, would be useless. Many natural resources, such as petroleum and rubber, would lie untapped, while machine-tending factory labor and highly-trained technical labor would give way to artisans and common unskilled workmen. In a word, without interregional trade the industrial structure of society, the qualities of labor,

and the types of natural resources and capital instruments used would be mediaeval in character.

In summary, it may be said that interregional trade equalises commodity prices (within limits set by the obstacles to trade), that it likewise brings about a partial but never complete equalisation of factor prices, and that it raises the real incomes of the factors of production by permitting them to be combined in efficient proportions.⁴ Furthermore, trade influences both the volume and direction of demand through its effects on incomes and on tastes, while both the quantity and the quality of factor supplies are affected.⁵ Interregional differences in factor equipment tend to be increased,⁶ while at the same time the very nature of the various kinds of equipment itself is altered.

Having some understanding of at least the significant effects of trade, it is possible to resume the process of gradual qualification of the abstract theory of Chapter V. Only two of the original assumptions remain unaccounted for: the abstraction from obstacles to trade and the assumption of intraregional mobility together with interregional immobility of the factors. It will be convenient to take up first the consequences resulting from the fact that labor and capital actually do move between regions.

INTERREGIONAL FACTOR MOVEMENTS

It may be stated at the outset that the chief obstacle to movements of both labor and capital is psychological in nature. Human beings dislike change, and the changes involved in breaking home ties, leaving secure employment and a familiar environment for a strange locality and an uncertain economic future, are painful to make. This psychological aversion to change is reinforced, when international movements of labor are considered, by differences in language, customs, and social institutions. Owners of capital are likewise reluctant to transfer their wealth across national or regional boundaries to places where it is no longer under

their direct supervision, and where the "real or fancied insecurity" is greater.

To this psychological obstacle must be added another, the financial cost of moving. This often, in the case of labor, though rarely with capital, constitutes an obstacle of the first importance. In fact, with regard to much of the nineteenth century emigration from Europe, especially from Russia and the southeastern portion of the continent, the cost of a passage to America was almost the only serious difficulty to be overcome, any aversion to change being more than outweighed by a positive desire to escape from compulsory military service, political and religious oppression, and a discouraging or hopeless economic situation.

Even when the obstacles to movement have been positive in nature, large quantities of labor and capital have been transferred from one part of the earth's surface to another. The characteristic stimulus to such movements has been the existence of a price differential: higher wages or higher interest rates in the region or country toward which movement occurs.

It will be recalled that one of the indirect effects of commodity trade is to bring about some degree of factor price equalisation. Anything that serves to increase the volume of trade, then, by reducing the differences in factor prices tends also to reduce the stimulus to factor movements and thereby to lessen the interregional flow of labor and capital. On the other hand, a shift of labor or capital from a low to a high wage or interest area will tend, as a direct result, to make these factor prices more uniform. But more uniform factor prices will mean greater equality of commodity prices, and hence a smaller volume of trade. Movements of goods and movements of factors may thus be regarded as substitutes for one another, trade in goods reducing the stimulus to interregional transfer of the factors, and movements of the latter lowering the incentive to trade.¹

¹ Only the most general results of factor movements, i.e., price equalisation and reduction of the volume of trade, are mentioned here. Under certain

EFFECTS OF OBSTACLES TO TRADE

Before examining the effects upon the volume and character of trade of obstacles to the free movement of goods, a word should be introduced as to the nature of these obstacles. The commonest, of course, are the inevitable costs of transporting goods from place to place, and the almost equally inevitable though more artificial tariffs.¹ But these by no means exhaust the list — anything that tends to obstruct trade must be included, such as "differences between nations as to language, laws, banking systems, habits, and traditions, in a word everything that makes it more difficult to trade in foreign countries than in others."¹ In any close study of trade in an individual commodity or between particular regions, all these elements would have to be given due weight. But because language and legal differences, etc., are so intangible, and vary so much in every instance studied, they lend themselves poorly to generalisation. Hence, having mentioned them and indicated their importance, we must, if only for reasons of space, compress our discussion of obstructions to trade very largely under the heading "costs of transport," with some incidental attention to tariffs.

With regard to transport costs, a preliminary general observation should first be made: the demand for transportation is a demand for numerous factors of production. This demand, added to all the other requirements for productive agents, of course affects their prices. Hence it is essential, in a complete and detailed survey of factor endowment and its influence on trade, to include this demand in the conditions, as when capital or labor moves from an old to a new country, thereby leading to a rapid development of virgin resources, incomes may be so increased in the undeveloped region as to lead to an actual increase instead of a diminution of trade. The essential point involved here, however, seems to be this: that the development of the new region makes accessible new natural resources, whose prices are still lower than those of older resources already being utilised — *i.e.*, price differences for this class of factor are increased. If, as is not unlikely, the inward-moving labor and capital are very productive when applied to these new resources, wage and interest differences may be increased rather than reduced. For a fuller discussion of this and related points, see Ohlin, *op. cit.*, pp. 170-172.

¹ *Ibid.*, p. 245.

price analysis. Such considerations can be left out of account when tariffs are the subject of discussion, since the requirements in the way of productive resources for the enforcement of tariff duties are relatively insignificant.

(a) *Quantitative Effects.* — (i) Reduction in Volume of Trade. The most immediate and obvious consequence for trade of the existence of transport costs is that the volume of trade is thereby reduced. (In the absence of costs of transport (and of all other obstructions), all commodities would be the objects of exportation or importation, except so far as the cost of producing some occasional article (by means of different combinations of the factors) might happen to be identical in two or more regions.) But when costs of transport have to be added to ordinary production costs, only those commodities can move between regions whose production costs proper differ by more than the cost of transferring them from one region to the other. Distinct from these interregionally-traded commodities are those goods whose interregional differences in costs are *less* than their costs of transfer. Trade in these domestic goods will not be profitable, and they will be produced at home.

(ii) Interregional Price Differences Increased. With the reduction in the volume of trade brought about by the presence of transport costs, a further correlative result ensues: the theoretical effect of trade upon prices in the trading regions is somewhat weakened. If to the price of each imported good a premium has to be added to cover the costs of transportation, the demand for each good will be somewhat reduced in volume. Hence the impact of reciprocal demand will bear with less weight on the prices of goods and factors in the regions involved, confining the tendency toward factor price equalisation within narrower limits.

(b) *Qualitative Effects of Transport Costs.* — To begin and end an examination of the effects of transport costs with a brief discussion of the reduction in the volume of trade these costs entail would, however, be inadequate. (For not only is the volume of trade reduced — the very nature of the goods

traded is significantly affected, for the reason that costs of transport bear with varying weight upon different commodities.) In fact, costs of transport, or costs of transfer (a broader term, covering transport costs, tariffs, and the intangible obstacles, to overcome which involves expense) must be put just below interregional differences in factor equipment as a basic element influencing the direction and the nature of trade. To the qualitative effects of these costs of transfer we may now turn. Let us begin by clarifying the nature of the problem.

The relative importance of costs of transport to different commodities depends upon two things: (1) the general level of transport costs; (2) the relative cost per ton-mile of transporting the different articles. The first of these is determined on the one hand by the geographical distance goods must be carried and on the other hand by the ease or difficulty characterising their transport (general conditions of transport). Under the latter heading are to be included the nature of the route over which goods are to be carried (ocean or navigable rivers as compared with the more expensive land transport, flat plains as contrasted with difficult mountainous country, etc.) and the endowment of the region crossed with the factors needed to provide good railways or roads and to operate and maintain them. These general conditions of transport may be regarded as elements which increase the economic distance as contrasted with the geographical distance goods have to be carried. Either physical or economic distance serves to raise the general level of transportation charges, whatever relative rates for individual commodities may be.)

The relative ton-mile cost of transport, on the other hand, is dependent upon the varying ease with which different goods may be carried (the *transportability* of goods). Some commodities, like wheat, raw wool, iron ore, petroleum, and many highly-fabricated articles, can be transported for a charge per ton-mile which is but a small fraction of their value, while others, like bricks, stone, fresh fruits, and vegetables, bear a transportation charge which bulks large in comparison with

their value. This relative transportability of goods (in terms of money costs) is in part the result of a real physical adaptability to carriage,¹ in part the consequence of the somewhat arbitrary freight classifications applied to different commodities by rate-regulating bodies.

Consider now the bearing upon interregional trade and the localisation of production of these two aspects of transport costs: the general level of rates and relative charges for different commodities.²

Little need be added to what has already been said with regard to the influence of the first element. Generally high rates restrict the total volume of trade, low rates stimulate the exchange of goods. Moreover, regions in close proximity or easily accessible to one another will exchange a large quantity of goods; regions separated by wide distances or linked by poor transport facilities will find their mutual trade handicapped.

Taken together with a scale of ton-mile rates varying for different commodities, however, the general level of transport costs has a qualitative effect on trade and the location of industry. Only goods subject to relatively low freight charges will move in large volume between distant or inaccessible regions; trade in articles subject to relatively high rates will be largely confined to regions between which the general level of rates is low. The localisation of production will be influenced in a similar fashion. Only the more cheaply transportable goods will be produced for export in regions distant geographically or economically from the chief markets, though the production of domestic goods will be most diverse in character. Regions close to the main markets, or linked to them by good general conditions of transport, on the other

¹ Compressibility of a large weight into a small bulk, as with wheat; possibility of applying efficient and cheap methods of handling or carriage, as with iron ore or petroleum.

² Since an economic region is always a sizable area, internal costs of transport must be included in the calculation of the cost of transporting goods from one region to another, taking the actual point within the region where production takes place as the basing point. Great internal distances or poor internal conditions of transport may thus influence the localisation of production in the same way as if they were external to the region.

hand, will tend to specialise upon export commodities whose costs of carriage are relatively high. At the same time, of course, the range of purely domestic products will tend to be much narrower.¹

Consider now the effect upon interregional trade and the localisation of industry of differential freight rates alone, regardless of interregional differences in their average levels. Assume, that is, a number of regions between which the general level of rates is identical. What then is the effect upon the localisation of production and upon the direction and the nature of the flow of goods of varying costs of carriage for different commodities? This problem is especially important in connection with the various stages of production, in particular with reference to the location of raw-material and finished-goods industries and the movement of their products.

The existence of differential freight charges establishes a general tendency for the commodity relatively most expensive to transfer (least transportable) to govern localisation, and hence to determine what type of goods will move from one region to another. This tendency holds whether only one raw material is involved or several. When the raw materials are costly to move as compared with finished (or more finished) products, the production of the finished articles will tend to take place at the source of raw-material supply, or with many raw materials, near that one whose cost of transport is highest. But when the raw material can be transported cheaply as compared with the finished product, the finished-goods industry will tend to locate near its market, the raw materials being brought to this point.²

¹ One difference between actual distance of carriage and general conditions of transport, both of which affect the general level of freight charges, may be noted at this point. Geographical distance is given once and for all, while "economic distance" may be altered. Therefore *changes* in the conditions of transport will tend to bring about correlative changes in interregional trade and industrial relations. Improvements in transport facilities will bring regions closer together, while deterioration of such facilities (*e.g.*, as the result of war) will increase the degree of isolation.

² To allow for differences in the general level of rates between regions, no new principle need be introduced. We can combine what is said here with the reasoning of an earlier paragraph. Suppose that of several commodities,

Thus, in the manufacture of iron and steel, coal, which is the raw material most costly to transport, attracts the iron ore rather than the opposite. Pittsburgh and the surrounding coal area is the greatest iron- and steel-producing region in this country, drawing its ore supplies from the Lake Superior district, though at such points as Gary, Indiana, where rail meets water, the elimination of one handling of the ore (together with nearness of a great market) has encouraged a sort of intermediate localisation. In the steel industry, instances of purely market localisation are difficult to find. The "pull" of a large market is often very important, however, notably in the case of the large mills at Sparrow's Point, Maryland, which obtain no important raw materials locally except water. Iron ore comes from Brazil, Chile, Sweden, Belle Isle, Cuba, and a score of other remote places, and to some extent, low ocean freight rates on ore shipments explain this case of localisation. Coal comes 160 miles or more from the interior.

Before the War, when the iron mines of Lorraine were in German territory, the bulk of the iron and steel produced in that country came from the great plants in the Ruhr coal

the production of each is located at the source of the raw material, because the freight rate on each of the raw materials is high relative to the charge for transporting the finished product. Which of several regions (each possessing the necessary raw materials) produces one or more of these finished products will depend upon *their* relative costs of transport taken in conjunction with the general level of rates. A distant or inaccessible region can only hope to export a commodity of this class whose shipping costs are low relative to those for the other finished products. In no event will such a region export the raw material. That question has already been decided by the relationship between freight charges on raw materials and finished goods.

Attention may be called at this point to the fact that changes in what we have called (following Ohlin) the general conditions of transport need not always be general, affecting all commodities alike, but may affect different commodities differently. Where this is the case, there has taken place a change in relative costs of transport which must be allowed for as such. On not infrequent occasions, only one or a few commodities are influenced by improvements in transport facilities. As an illustration of this we may cite the alteration in the localisation of the packing industry of the United States resulting from the introduction of refrigeration into railway transport. Before refrigerated cars were available, cattle and hogs were shipped to the local markets, to be slaughtered there. Now the great packing plants are located chiefly in Chicago and Omaha, points more central to the source of "raw materials."

district, the ore being brought from the Lorraine mines. Since 1918, however, the iron deposits have been in French hands, and French national policy has stimulated the growth of steel production in Lorraine. As an illustration of market localisation, British woolen manufactures and flour milling may be cited. British coal and iron deposits have attracted a great iron and steel industry, including therein those branches devoted to the fabrication of machines, ships, and other finished articles. The growth of these industries has called forth large supplies of labor and capital, thereby attracting still further industries, and creating great markets for finished goods. The presence of large markets and adequate supplies of the needed factors proved more powerful in attracting the manufacture of woolen materials and flour than did the raw materials themselves, which are comparatively cheap to transport.¹ Consequently, Australia and New Zealand export raw wool and wheat, and were it not for their import duties, would import their woolen manufactures and flour from Great Britain. Among the most striking instances of market localisation is the baking of bread. To transport this product any distance is costly and difficult while the cost of carriage of flour is, compared to that of bread, very low. Hence flour moves from the mills, which are to a considerable degree located near the largest markets, to the bakeries, which are widely scattered in the vicinity of small local markets.

INTERREGIONAL AND INTERNATIONAL TRADE

The type of analysis applicable to interregional trade may generally be used without substantial change in dealing with problems of international trade. Nations, indeed, are merely

¹ Historically, of course, the woolen manufacture in England antedates iron in its rise to importance. Hence one is only entitled to say that the great development of the iron and steel industry has stimulated the further growth of the woolen industry, and, together with the advantage derived from the fact that the woolen manufacture is an old, established industry (inertia), has kept it in England in spite of the fact that the source of raw materials has shifted from England itself to distant regions.

regions distinguished from one another by such obvious marks as national frontiers, tariff barriers, and differences in language, customs, and monetary systems.

Two points wherein an economic region and a nation may differ, however, require comment. Some regions, which from many points of view are economically homogeneous, include territory on both sides of an international boundary. The western part of Roumania, for example, is economically more closely linked with other portions of the great Danubian basin, notably the eastern portion of Hungary, than with that part of the country lying east of the Carpathian Mountains. (Prior to the War, what is now western Roumania was actually a part of Hungary.) Confronted with such a situation, the economist will do well to treat the international region as an economic unit. Allowance must, of course, be made for the effects of such artificial barriers as tariffs; yet frequently the similarity of resources, the mobility of labor and capital, and long-established trading habits will be of more basic importance. Quite frequently, indeed, national policy recognises the economic interdependence of such a multi-national region, introducing into national tariffs exceptions with respect to border trade.

On the other hand, many nations (we need mention only the United States, Russia, and China) comprise far more than a single economic region, being made up, in fact, of several regions differing widely in their endowment with the various productive agents. Where regional differences within a nation are important, it would seem best to adopt the regional analysis. Insofar as any relevant economic considerations are purely national (as with regard to matters relating to transportation, communications, or the effects of monetary policy), they must, of course, be so treated.

CONCLUSION

Among the wide range of topics covered in this chapter, brief consideration was accorded certain of the more important

effects of trade, as well as movements of the factors. The remaining pages were devoted to qualifying and elaborating the basic theory of interregional trade. With the object of seeing in perspective the essential elements of this theory, let us attempt to state it in a very condensed form.

Regional differences in factor equipment occupy the fundamental position in the explanation of interregional specialisation and trade. Given such differences, factor prices will vary from region to region, which in turn means that commodity prices will differ. As supplementary causes of interregional price differences, the social conditions of production and the economies of large-scale production must also be taken into account, the latter resting chiefly on the fact that certain concrete types of capital equipment are but imperfectly divisible.

The establishment of commodity-price differences provides the basis for interregional specialisation and the exchange of each region's specialties for those of other localities. In the absence of costs of transfer, each region would produce those commodities for which its factor equipment best fitted it, exporting all these products in exchange for goods more cheaply produced elsewhere. All commodities would enter into interregional trade. The existence of costs of transfer (in particular, transport costs), however, immediately both narrows the range of goods traded and influences the localisation of production and the interregional movement of goods.

Attention should be called to the fact that the various forces determining the character of national or regional industries and trade differ in importance under different circumstances, a point which must be borne in mind in applying the analysis to a concrete situation. It must also be realised that these forces — relative endowment with the productive factors, social conditions of production, economies of large-scale production, and costs of transfer — constantly react upon one another.¹

¹ For a fuller discussion of the topics treated in this chapter, the interested reader is referred to Ohlin's book, especially Chapters VIII to XIII. Con-

SUGGESTED REFERENCES

Ohlin, Bertil, *Interregional and International Trade*, Chapters V-XII.

Taussig, F. W., *International Trade*, Chapter 16.

Taussig, F. W., *Some Aspects of the Tariff Question* (Harvard University Press, Cambridge, 1931).

Killough, Hugh B., *International Trade* (McGraw-Hill Book Co., New York, 1938), Chapters XII-XVIII.

Black, John D., "Interregional Analysis with Particular Reference to Agriculture"; Part I, Chapter XIX, of *Explorations in Economics* (McGraw-Hill Book Co., New York, 1936).

Zimmermann, Erich W., *World Resources and Industries* (Harper & Bros., New York, 1933).

Jones, C. F., *Economic Geography* (Henry Holt & Co., New York, 1935).

siderations of space have severely limited the scope of treatment in the above pages. In spite of the necessary condensation, it is believed that the more important points have been covered.

An excellent critical discussion of many relevant issues will be found in Viner, *Studies in the Theory of International Trade*, pp. 500-516. See especially his remarks on Ohlin's treatment of qualitative differences in the factors, p. 501 n.

CHAPTER VII

THE FOREIGN EXCHANGES: THE MECHANISM OF INTERNATIONAL PAYMENT AND THE BALANCE OF PAYMENTS

IN the preceding five chapters, our primary concern has been to explain the forces governing the movements of goods and of factors of production between different regions and countries and, as a coordinate problem, to explain the source of origin — *i.e.*, the localisation of production — of the interregionally-traded goods. The explanation finally accepted runs primarily in terms of relative differences in regional factor equipment and of costs of transfer. While the analysis given is not adequate to the solution of all problems in its field, it does disclose the most important basic forces underlying the course of international trade.

The framework of the discussion, however, has been that of a stable equilibrium situation. That is, on the assumption that trade is carried on under settled, undisturbed conditions, answers have been provided to the questions, what goods will be traded and what will be the terms of this interregional exchange? A third question (formulated at the beginning of Chapter III), how is adjustment made to disturbances of international equilibrium, has been touched only incidentally. Furthermore, no attention has been given to the methods by which internationally-traded goods are paid for — these payments have been tacitly assumed to be made, in some way, without difficulty. It is now time to attempt to understand the mechanism of international payment and to discover the method of adjustment to disturbances of international equilibrium.

This chapter will be devoted to the mechanism of international payment. That some special mechanism must be provided in the case of international trade seems to be clear. When business men of country A sell goods to citizens of country B, they will naturally want to be paid in their own currency; yet the buyers of B will have available only the currency of B. The same holds true of many other types of international commercial transactions, such as the services rendered in banking, shipping, insurance, and the tourist trade, as well as financial transfers such as loans and interest on loans. Though merchandise transactions constitute the largest single item in any nation's international accounts, services and financial payments are always of considerable quantitative importance, and each and every item of this sort involves making a payment in a foreign currency. It is, of course, through the foreign exchanges that such payments are made.

BILLS OF EXCHANGE

International transactions have at least two characteristics in common with those taking place in a given locality — they are carried on by individuals, and they are reckoned and paid for in the usual way, by means of money or bank deposits. Unlike local transactions, however, those of international scope cannot be settled on the spot; payment for them has to be made at a distance, and this payment has to be made in the money of another country. These differences give rise to special methods of transferring funds.

If a buyer and seller are situated at different points within the same country, they too are confronted with the problem of making a payment at a distance. If only a cash payment is involved, the cheapest and safest method is for the buyer to mail a check on his bank. This, duly deposited in the seller's bank, completes the transaction so far as the immediate parties are concerned. The seller's bank will be recompensed by having the check cleared through the central banking institution of the country, an institution with which practically all

civilised states are today provided. If, however, the buyer had wished to postpone payment until some more convenient time in the future, a domestic bill of exchange might be used. To illustrate, suppose a manufacturer in New York sells \$5,000 worth of goods to a Chicago wholesaler. The manufacturer would then draw a bill of exchange for this amount on the buyer. Such a bill is merely an order by the drawer (here, the manufacturer) on the drawee (wholesaler) to pay a specified payee (usually a bank) at some definite time in the future.* This bill the manufacturer would "sell" to his bank for its face value less the current rate of discount for the duration of the bill, receiving in payment an addition to his deposits at the bank. His bank, in turn, would forward the bill to a correspondent bank in Chicago (probably named as the payee in the bill), which would have it accepted by the wholesaler, and, when it came due, would collect its full face value from him, holding this amount to the credit of the New York bank. As a result of this series of steps the balance of the New York bank at its correspondent bank in Chicago has been increased by \$5,000, its own deposit liabilities have been increased by this amount less the discount. The difference, equal to the discount for the period the bill was outstanding, constitutes the earnings of the New York bank for undertaking the transaction. Alternatively, had the New York bank not wished to increase its balance in Chicago, it could have held the discounted bill until due, then turned it over to the Federal Reserve Bank of New York for collection, receiving in payment additional deposits with that bank.

Clearly, the use of a bill of exchange results in the performance of certain very definite services. The seller of goods is enabled to secure immediate payment, the buyer is permitted to pay at some time in the future, and payment is made at a distance with great ease.

Foreign payments are handled in a manner exactly similar to that just outlined. The only difference is that two currency units are involved. This naturally raises the question of the relative value of these currencies, but for the moment this

problem may be postponed while we analyse more carefully the mechanics of international payments. To illustrate this method as applied to an international transaction, suppose an American exporter has shipped goods worth £1,000 to a British importer. After drawing a sterling bill for this sum upon his customer, he will have it discounted by the foreign-exchange department of his bank. If we may presume the value of a pound sterling to be \$5.00, he receives \$5,000 less the rate of discount for the period the bill has to run. The American bank will then send this foreign bill to its correspondent bank in London, which will present it to the importer for acceptance. The correspondent may hold it until payment is due, in which case it will at the specified date receive and hold to the credit of the New York bank £1,000, or it may sell the bill in the London discount market. In the latter event, the pound sterling value of the bill, less the London rate of discount for the period it still has to run, will be made immediately available to the New York bank. By this simple mechanism, the American exporter receives payment in dollars, while the British importer is enabled to pay in pounds sterling. To make this outcome possible, the American bank has simultaneously increased its dollar (deposit) liabilities and its pound sterling assets.

If American imports from England are handled in what is to the British seller a parallel fashion, the British exporters will draw dollar bills on American importers, selling them to London banks. The exporters are then out of the picture, having received sterling deposits equal to the value in sterling of the dollar bills of exchange, less discount until maturity. The London bank will forward these bills to its New York correspondent for acceptance and later for collection. When collected (or sold in the New York discount market), the amount in dollars is carried to the credit of the London bank. Thus the mechanism in this case is an exact replica, in the reverse direction, of that in the previous situation, where American exports were involved. Now, a British bank increases its liabilities by advancing sterling deposits, while it

increases its assets in the form of additional dollar balances in New York. In both instances, whether American or British exports are in question, what happens is essentially this: a bank in the country where the bill originates takes over the debtor-creditor relationship of the parties to the goods transaction (that is, relieves the buyer and the seller of the status of owing and being owed), advancing bank deposits to the creditor in his own currency and, after collection service is rendered by the foreign bank, holding bank deposits in the debtor country.

Implicit in such a situation as that just described, with trade in goods going on in both directions, is a simple method of clearing obligations, thereby obviating the necessity of transferring directly from one nation to the other any appreciable amount of funds. So far as each member of a pair of correspondent banks becomes equally in debt to the other, they can agree periodically to cancel their mutual indebtedness (calculating the relative value of the two currencies at the current rate of exchange). Any single bank whose debit or credit balances piled up to an undue degree in one market could adjust its position by exchanging its excessive balance with some bank whose balance ran the other way. For the foreign exchange markets as a whole, considering all transactions between the two countries, the great bulk of the balances will cancel out, leaving only a small amount to be settled separately.

There is, of course, another way in which international payments could be initiated and carried through. The initiative may be taken by the importer. To illustrate, suppose an American importer has arranged with the British exporter from whom he is buying goods to follow this method. He will proceed to the foreign-exchange department of his bank (say in New York) and buy a draft on its correspondent bank in London for the sum he owes.¹ This draft will of course be

¹ In this illustration dealing with imports, the draft (or banker's demand bill) is the usual form of instrument used, though on occasion, a banker's long bill, not payable until some future time, might also be purchased. In the export illustration, however, the bill referred to was a trade acceptance, i.e., a bill

drawn in pounds sterling, and will be made payable to the British exporter. Here again the debtor-creditor relationship is taken over by the banks concerned. The American bank is given a check in dollars to the value of the bill (calculated, of course, at the current rate of exchange), which reduces its deposit liabilities (or, if it is drawn on another bank, increases its dollar assets). When the draft is paid in London, the balance it has built up by means of American export bills is reduced. It exchanges part of its sterling assets for dollar assets, or for a reduction of dollar liabilities. (From the point of view of the London bank, a reduction of its indebtedness to the New York bank has occurred.) So far as payment for American exports is secured by sending sterling export bills to London for collection, while payment for American imports is made by the purchase of sterling drafts, American banks are paying out and taking in dollar deposits, while at the same time building up and tearing down sterling balances at their correspondents in London.¹

Let us carry this line of analysis a little farther. Each bank, so far as it is a foreign exchange dealer, is a *dealer* in foreign currency (in the form, especially, of bank balances). Now as a dealer in foreign exchange, its profit is derived from selling foreign balances at a slightly higher price than it pays for them. Like all dealers, the foreign-exchange department will try to keep its normal stock-in-trade as low as is consistent with good business practice. To this end, it will attempt to follow the

drawn upon a commercial or industrial firm and subject to acceptance by that firm before payment could be demanded. There are, of course, many other types of bills used in connection with exports, among which the more important are bankers' acceptances, similar to a trade acceptance except that the drawee and acceptor is a bank instead of a commercial or industrial firm; commercial demand (or sight) bills — bills payable by the drawee, a commercial or industrial firm, immediately upon presentation — and long commercial bills, similar to the latter except that they are not due for payment until the lapse of a specified period of time. In addition to these common types of bills and drafts, there are also cable transfers — in effect, telegraphic bankers' demand bills, and travelers' checks — a special form of bankers' demand bills.

¹ These operations, of course, can be and are carried out in the opposite direction, *i.e.*, British exports may give rise to dollar deposits in American banks, while these are reduced by drafts drawn for the payment of imports from the United States.

general principle of matching each purchase of foreign exchange with a sale. If it is successful in adhering to this principle of matched purchase and sale, its balance will remain at a constant figure. Again, if any individual bank finds itself unable to balance purchases and sales of foreign exchange and thereby sees its foreign balance becoming either unduly large or unduly small, it can reduce a deficit by acquiring additional foreign funds from banks with surpluses, or reduce a surplus by sales to banks that find their balances deficient.

Thus each individual bank, if it is successful in maintaining a normal foreign balance (*i.e.*, if it approximately matches purchases and sales of foreign exchange), effects a perfect clearance through its correspondent balance of all international payments carried through by its aid. And the action of all the individual banks taken together has an equal significance for the foreign exchange markets considered as a whole: payments due from one market to another are cleared, so far as clearance is possible.

Let us now briefly summarise the benefits derived from the use of foreign bills of exchange and the establishment of the banking relationships thereby involved. This method of making foreign payments makes possible the following results: (1) payment can be made at any distance; (2) payment can be made in a foreign currency; (3) the buyer is enabled to get goods on credit, while the seller secures immediate payment; (4) international payments are very largely cleared by the mutual cancellation of debits and credits passing through foreign balances. All these consequences follow simply from the fact that, as an incident in the pursuit of profit, banks take over the debtor-creditor relationship of buyers and sellers. Thereby there is established a simple means of securing the first three results. Moreover, in following the trading logic of matching each purchase with a sale, the banks effect a clearance of the major portion of all foreign payments, thereby making all but a small net settlement unnecessary.

DEMAND FOR AND SUPPLY OF BILLS OF EXCHANGE

From the foregoing illustrations it is apparent that, depending upon where the initiative in making or securing payment for international shipments of goods is taken, exports will give rise to a supply of bills of exchange and imports to a demand for such bills. If international transactions were limited to trade in merchandise, this would be the only topic related to the demand for and the supply of bills of exchange that would require treatment. There are, however, many other types of transactions for which international payments have to be made. For convenience, these may be classified into three groups, distinguished from one another (with minor exceptions) on the basis of differences in the motives for which they are undertaken :

- (1) Commercial transactions. These include a very large, normally much the largest, proportion of international payments, such as those for goods, services, tourists' expenditures, earnings on international investments, and such miscellaneous items as immigrants' remittances, foreign expenditures of governments, and the like.
- (2) Financial transactions. This group includes both long- and short-term international lending, responding primarily to differences in interest rates between different countries.
- (3) Speculative transactions, running all the way from anticipation of seasonal movements in exchange rates to panic flights of capital.

Let us examine these various sources of demand for and supply of foreign exchange, at the same time giving brief consideration to the forces determining the size of each type of payment.¹ Suppose that we consider the dealings of the United States with the rest of the world to be carried out

¹ It seems advisable to enter a caution at this point. Whatever foreign exchange market one imagines one's self to be in, it is imperative to retain that orientation, or, if a shift is made to another market, to revise all one's calculations accordingly. For what is a demand for exchange in one market is a supply of exchange in the other (related) market, and to change about from one market to another, or to do so without a full understanding of the altered implications, is to invite hopeless confusion.

through the New York-London exchange markets, and that we presume the initiative in making or securing all payments to be taken in the United States. All payments due to Americans by residents of other countries will then give rise to a supply of bills of exchange drawn in pounds sterling, while all payments due from Americans to foreigners will be the source of a demand for drafts (bills of exchange) also drawn in sterling. The balances through which clearance of international indebtedness is effected will thus be the sterling (London) balances of American banks. These balances will be built up by any transaction giving rise to a supply of exchange, torn down by any transaction leading to a demand for exchange.

(a) *Commodity Exports.* — American commodity exports will, as already indicated, be a source of supply of bills of exchange, their total value depending upon the tastes and incomes of foreign consumers and the prices at which our exports are sold. Variations in their volume and therewith in the supply of foreign exchange may be caused either by changes in the demand of foreign buyers or by changes in the costs of American producers or their foreign competitors. An alteration of demand may be the consequence of a sudden or gradual shift in tastes, perhaps induced by sales promotion activity on the part of sellers, or it may result from a rise or fall in the general level of buyers' incomes or from a change in their distribution. Changes in costs of production, as we saw in earlier chapters, may proceed from any one of a number of causes, such as the progress of invention, the extension of large-scale production, or alterations in the supply of the productive factors.¹

An excellent example of some of the effects of changing factor supply is to be found in the opening of the Middle West to exploitation. This event, a result of the prior

¹ The price in the foreign market, which, given the demand schedule of buyers, determines the quantity of any export taken, of course includes transportation charges. Therefore changes in the supply of factors affecting transport costs (internal or external) and improvements in transportation must also be taken into account.

development of improved means of transportation, greatly increased the supply of fertile farm land in this country. Costs of producing wheat fell sharply, rents of competing land tumbled throughout the world, American wheat exports expanded steadily, and income distribution in this country was altered in favor of the farming community. With larger farm incomes, the demand for agricultural equipment increased; with a broader market, producers of this equipment were able to introduce large-scale methods of production, thereby lowering their costs and stimulating increased foreign as well as domestic sales.

Quite as effective as decreased costs of production in bringing about lower prices and increased exports is, of course, any occurrence serving to lower or raise the costs of transfer. The foregoing illustration, though it involved a great increase in the supply of wheat land, had its beginning in the reduction of transportation costs through the expansion of railways into the Middle West. Likewise a decrease in tariff rates will serve to lower the prices of the commodities affected. More of these goods will then be imported into the country making the tariff reduction. Whether this country's total expenditure on these articles and thus its demand for foreign exchange (or the supply of exchange in the exporting country) will be greater, depends upon the average elasticity of these demands.

(b) *Commodity Imports.* — Imports into the United States are, of course, a source of demand for foreign exchange. They are subject to similar considerations with respect to variations in their volume as exports: namely, changes in the underlying demand or cost conditions. The only difference is that in this case it is the demand of home consumers, the costs (including transportation charges) of foreign producers or their domestic competitors that are relevant.

(c) *Services.* — Closely related to commodity exports and imports, and of considerable quantitative importance, are various international services. These consist chiefly of shipping, insurance, and banking services. When rendered

by Americans to foreigners, they give rise to a supply of sterling bills; when performed by foreigners for Americans, they become the basis of a demand for exchange. While dependent in the first instance upon the volume of recent commodity and financial transactions, the total of inward and outward service payments is also subject to independent variation arising from changes in the costs of rendering these services. Together with the influence of nationalist favoritism and the hold of established connections, *relative* competitive efficiency determines whether a domestic or a foreign actuary, shipper, or banker is to be employed and therefore how these charges are divided into payments due from and due to foreigners.

(d) *Tourists' Expenditures.* — Goods and services purchased abroad by tourists are closely akin to the aforementioned items. They are tantamount to imports into the country of which the tourists are citizens, the only difference being that the travelers instead of the goods and services are moved to the point of consumption. If the consumers are American citizens traveling abroad, their purchases are the basis of a demand for foreign currency; if the foreigners travel in the United States, our sales to them furnish, just as in the case of exports, a supply of foreign exchange.¹

Since tourists' expenditures are a form of direct consumers' outlay, they are determined on the one hand by the tastes and incomes of the prospective travelers, and on the other hand by the costs, at current rates of exchange, of foreign travel. In the long run, the incomes of the touring class in any nation depend on general productive efficiency in the country, the size and relative incomes of various non-competing groups, and the distribution of ownership of the factors of production. Over shorter periods of time, incomes of such individuals very largely reflect business conditions.

¹ Usually the traveler purchases the foreign credits he is going to need before his departure from his own country, taking these credits with him in the form of a letter of credit or travelers' checks. Hence when foreigners travel in America, their prospective expenditures in this country were earlier the source of a demand for American dollars.

Their desire for foreign travel rests primarily on previous education, local and national habits, and the effectiveness of advertising and propaganda in favor of such travel. Of course political disturbances at home or abroad tend to reduce the desire or the willingness to visit foreign countries.

(e) *Miscellaneous Items.* — Often listed together with tourists' expenditures in a sort of catch-all classification are other miscellaneous transactions, such as immigrants' remittances, charitable contributions, foreign expenditures of governments, and so on.¹ From the point of view of American foreign exchange relations, if these remittances of funds are made by our nationals to residents of other countries, it is necessary to buy foreign currencies — that is, the demand for foreign exchange is augmented. To the extent that funds are transferred to this country, our supply of foreign exchange (or, abroad, the demand for dollars) is increased. Since the initiative in making these payments is ordinarily taken by the sender, they usually give rise to a demand for bills in the sender's country.

The volume of immigrants' remittances during any period depends primarily upon the incomes being earned by the immigrants in question, upon the degree of their filial devotion, and upon the state of need of their relations in the old countries. Charitable contributions going to foreign points (such as funds for foreign missionary establishments, Red Cross relief work, etc.) are determined in the first instance by the state of finances in which the charitable organisations find themselves and the degree of need existing abroad. The volume of funds in their exchequers may be traced back to the yield of endowments (a matter of the financial sagacity

¹ Strictly speaking, immigrants' remittances and charitable contributions are transfers of capital, and might therefore logically be placed in the second group of international transactions, along with short-term and long-term capital movements. These movements of funds, however, are not undertaken for financial reasons, but from motives principally of a humanitarian nature. Though these motives are decidedly non-commercial, nonetheless it seems more appropriate to place them in a catch-all classification in the commercial group, rather than in the category of financial transactions, or in a totally separate and relatively unimportant group.

of the investing body and of general business conditions) and the philanthropic state of mind (perhaps financially or, as in the case of the Italo-German invasion of Spain, politically conditioned) of their benefactors.

(f) *Earnings on Investments.* — Arising as a consequence of international investment operations is another considerable source of demand for and supply of foreign exchange: interest and dividend payments. Although originating in financial transactions, these payments are made for a service — the use of capital — and therefore may be appropriately listed with other service items in the commercial group. Here the investor or security owner is the person to whom payment is due for the use of his capital. Thus, so far as the relations of American citizens with the rest of the world are concerned, American owners of foreign stocks and bonds, having earnings claims on the rest of the world, will enter the New York foreign-exchange market with a supply of sterling,¹ while others in this country who have borrowed from (sold securities to) foreigners and therefore with interest and dividends to pay, will be in the market as buyers of sterling.

Since interest due or receivable arises only out of *past* loans, the amount of payments on this account and thus the demand for or supply of exchange depends entirely upon the volume of previous loans, whether short- or long-term.² Earnings paid to owners of equities, on the other hand, will vary with the level of business activity and with the dividend policy of corporations.

The quantitative importance of this source of demand or supply of exchange naturally varies with the history of a country's debtor or creditor status. When a nation lends or borrows for a long period of time, the accumulation of interest charges (and dividend payments) may come to exceed the

¹ In actual fact, the payment of claims of American owners of international securities would probably be initiated abroad (*i.e.*, in the London exchange market), and would thus give rise to an additional *demand* for American exchange rather than to an additional *supply* of sterling exchange.

² Except, of course, where business conditions affect the solvency of debtors in general.

amount of the new annual lendings or borrowings. For Canada, during the period 1900-13, interest and repayment of loans amounted, on the average, to nearly as much as current new borrowings. And Great Britain, which has a longer history as an international lender than any other country, received during the post-War years considerably more from interest on overseas investment than she was currently lending.

We may now proceed to an examination of the second of the three groups into which we divided the sources of demand for and supply of foreign exchange. This category consists of two items, long-term and short-term loans, whose movements into or out of a given country depend, in the first instance at least, upon differences in the relevant interest rates in the more important international money markets.

(g) *Long-Term Foreign Investment.* — The international purchase and sale of securities constitute a very large and important source of demand and supply of foreign exchange. Sales of securities (including American-owned foreign stocks and bonds) by Americans to foreigners give rise to payments due to the United States and thus to a supply of sterling exchange, while American purchases of foreign securities (or repurchase of foreign-owned American securities) means that payments are due from this country and thus that our demand for exchange is raised.

This particular type of international transaction may also be treated as international lending and borrowing or as international investment, for the act of lending or investing involves the purchase of foreign securities. Then when Americans lend or invest abroad, to transmit the loans it becomes necessary to convert dollars into pounds sterling or some other currency. Payments are due from our citizens to others, and the demand for sterling exchange is increased. When, on the other hand, Americans borrow abroad (foreigners invest here), foreign currencies must be converted into dollars, payments are due to Americans, and we are entitled

to draw an additional supply of foreign bills to the amount of the sums borrowed.

These operations are also frequently referred to as the export and import of capital. Thus American loans or investments abroad constitute an export of our capital in exchange for foreign securities, American borrowings abroad an import of foreign capital in exchange for American securities.

Which of these forms of statement is used is immaterial; what is essential is that the nature of the underlying transaction and its relation to the foreign-exchange markets be clearly understood. Confusion may always be avoided, however, if international investments, loans, or capital movements are regarded as the international purchase or sale of securities. For the movement of the securities, like that of exports or imports of goods, is always in a direction opposite to that of the accompanying payment. The use of the terms "export of capital" and "import of capital" in particular are apt to be confusing to the uninitiated, since an export of capital is likely to be associated with an export of commodities as to the direction of movement of both the things paid for and the payment itself. As a matter of fact an *export* of capital involves an *import* of securities and thus an *outward* payment on the part of the capital exporter, directly opposite in its effects on the exchange market to an export of goods.

Both the size and the direction of international investment depend in the main on relative differences in interest rates, although the risk of exchange fluctuations (to be considered more fully in connection with short-term lending) will enter into the calculations of investors. In addition, so far as the securities concerned are not of grade A quality, there is the danger of loss of principal, for which a premium in addition to the basic rate of interest will be exacted. When the securities in question are not of the fixed-income type (bonds), but rather of uncertain yield (common stock), both current and prospective earnings will enter into the calculations of investors. On the basis, then, primarily of calculations as

to yield, the stream of investment may pour into a country or pour out of it, giving rise in the one case to a supply of foreign exchange, in the other to a demand. The general trend of long-term capital movements is from the older, more developed countries, with plentiful capital and low interest rates, to the newer, undeveloped nations, where capital is scarce and interest rates are high. On occasion, of course, the movement may be from a younger to an older country, as from the United States to Germany after the War, owing to the abnormal shortage of capital in Germany at that time. And sometimes, even commonly, capital moves both ways. Americans, for example, invest in British firms at the same time that British subjects are buying American securities, each group of investors being influenced by similar considerations of sound or profitable investment, though arriving at different conclusions.¹

(h) *Short-Term International Loans.* — In the period since the War, short-term international loans have become an increasingly important factor in the foreign exchanges, at times, as in the financial crisis of 1931, exercising a seriously disturbing, even disastrous influence. At this point, only the more normal movements of short-term funds will be considered: those taking place in response to differences in discount rates in the various money markets. These interest-rate differentials may be the result of divergent conditions in the two markets with respect to the abundance of loanable funds in relation to the short-term capital requirements of the community, or they may be the consequences of dissimilar central banking policies. Thus more active business in one center, giving rise to a relatively more substantial demand for working capital, will tend to raise the rate relatively to that ruling in the other money market. The imposition by the central bank in one locality of a restrictive

¹ Frequently these bilateral movements of capital are the result of the commercial policy of corporations designed to establish international connections and often related to schemes of international combination. On this topic, see Part II, Chapter VIII.

credit policy, in another of a neutral or easy-money policy, will likewise tend to establish differences in discount rates.

International short-term loans are identical in their effect upon the foreign-exchange market with long-term loans (security sales and purchases). A New York bank borrowing temporarily from a London bank must have the sum of the loan paid over to it. Looked at from the point of view of the instruments involved, it exchanges its promise to pay in the future for a sum of money to be paid now. Hence it will enter the New York exchange market with a claim on London, or a supply of sterling exchange. Conversely, if a New York bank lends to London, either it will have to purchase sterling in order to transmit the loan to London, or the borrowing bank in London will enter *that* market with an additional supply of dollar exchange to the amount of the loan. Although an outward or inward movement of funds, whether short-term or long-term, thus gives rise to a demand for or supply of foreign exchange in the market in question, nonetheless the mechanism of short-term lending is sufficiently unique to warrant separate consideration.

Suppose, then, the rate of interest for short-term loans is higher in New York than it is in London. London banks will then be anxious to lend in the New York market, New York banks to borrow in London in order to re-lend in New York. By mutual arrangement, New York banks will draw sterling bills on London (long bankers' bills), which when accepted and discounted there will establish sterling balances to their credit. These balances they can then sell to individuals having payments to make in England, the dollar proceeds derived from the sale of these balances being lent in the New York money market.¹ An American buyer of such

¹ The dollars acquired by the New York bank for its sterling balance may be in the form of a check on some other bank, or if the bill is sold to one of its own depositors, in the form of a check on itself. If the former is the case, its reserves will be augmented, through a favorable clearing-house balance, to the amount of the price paid for the bill. If the check is drawn by one of its own customers, its deposit liabilities will be reduced by a like amount. In either event, it is now free to expand its loans and deposits by the sum in question.

a bill (say an importer) will forward the bill to London, where after acceptance by the correspondent of the New York bank it will be discounted in the London discount market, the proceeds becoming available for payment of the importer's debt. Just before the bill matures, the New York bank will be obliged to buy sufficient sterling exchange in the form of a demand bill to meet its maturing obligation in London. This new bill, sent to London, will provide the accepting bank with funds to discharge its debt arising out of the original bill when the latter is presented by the person who acquired it from the London discount market.

Should the difference in interest rates in the two markets persist,¹ both the New York and the London banks would desire to continue these lending operations. This could easily be done by renewing the loans in the following manner: each borrowing New York bank would, just before the original sterling bill came due, merely draw a second long sterling bill on its correspondent in London, sell this as usual in the New York market, and use the proceeds to buy a demand sterling bill to cover the original one.

Had the New York banks at the outset been possessed of large sterling balances to their credit in London, it would have been possible for them to draw drafts against these balances and to lend the dollar proceeds as above without entering into any debtor relationship with London. If this were the case, the New York bank would simply be exchanging a London balance of pounds sterling for dollars to be lent in New York. In our illustration of short-term lending, dollars are secured from American purchasers of sterling exchange in return, not for an existing sterling balance, but for an advance of sterling funds, the ultimate source of these funds being the London discount market.

Implicit in the foregoing discussion is the assumption that the foreign-exchange rate is constant throughout the period

¹ Normally, of course, the effect of a movement of funds such as that described will be self-eliminating, since it will tend to reduce the difference in discount rates between the two markets.

of lending. If, however, the rate varies during this interval, the gain from lending may be much smaller or much larger than was anticipated. Variations in exchange rates may, therefore, be of equal importance with interest-rate differentials in determining the volume and direction of movement of short-term funds. Their effect may best be made clear by means of an illustration. Suppose the short-term rate of interest is 3% in London, 5% in New York, and the current rate of exchange, \$4.86. London banks will under such circumstances, we may assume, authorise New York banks to draw long bankers' bills on them, sell these in the New York exchange market, and lend the proceeds in the New York money market. A bill for £1,000 will thus provide \$4,860 for investment in New York, and at the end of the period for which the bill was drawn (say three months), this sum plus \$54.67 net interest (\$60.75 interest less a commission of $\frac{1}{2}\%$) or a total of \$4,914.67 will be available for repayment to London by the purchase of a sterling draft. If the rate of exchange is still \$4.86, this will yield £1,011.25, which exceeds by £3.75 the principal plus what could have been earned (£7.5) in London at 3%. If, on the other hand, the rate has risen to \$4.88, \$4,914.67 will purchase but £1,007.10, which is slightly less than the principal together with interest at the London rate.

Thus a slight fluctuation in the exchange rate can wipe out all profit on a lending operation, turning it into loss. On the other hand, a variation in the rate in the opposite direction would yield a handsome profit. The more unstable the exchanges, the greater is the risk entailed in lending. Under unstable conditions, therefore, the volume of such international lending will tend to be reduced, being confined to those lenders who are willing risk-takers. To this conclusion we may add the following: the *prospect* of a rise in the rate of exchange (*i.e.*, of a fall in the international value of one's own currency) will encourage lending in foreign money markets, since it promises a profit; the opposite holds true of a prospective fall in the rate. The height of the exchange

rate at any moment is of no significance, because lending involves the future, not the present.

The third group of forces operating in the foreign exchange market, those of a speculative or exceptional nature, remains to be considered. Speculation may be defined as an expenditure made under conditions of uncertainty as to the relation between the outlay and the return, that is, a transaction involving risk. It thus appears that practically all business dealings, whether international or domestic in scope, are more or less speculative. Some transactions, however, have as their principal object the deliberate assumption of a risk; their executors hope to gain *because of* the uncertainty inherent in the situation. Such undertakings may be classed as pure or outright speculation. It is with these that we shall be principally concerned here. In all other business dealings, although uncertainty (and therefore speculation) is in the nature of things present, the speculative element is incidental; the source of gain is primarily to be found in a return which may normally be expected (as in production for sale at a profit, lending for the sake of the yield in interest, etc.).

Pure speculation in foreign exchange, possible because the rate of exchange between any two currencies is constantly fluctuating, is undertaken with the hope of anticipating correctly these movements of the exchange rate. Speculators may foresee a rise in the dollar-sterling rate. To profit from this expectation, they will purchase sterling now ("go long" of sterling), disposing of it at a later date (at a higher price, if their anticipations prove correct). There are three main methods by which speculators may "go long" of a foreign currency, say sterling. (1) They may purchase long (*e.g.*, 60-day) sterling bills, holding these until they fall due, or at least not disposing of these holdings immediately. (2) They may purchase sight drafts on London and hold the balances there (presumably in the form of loans on which interest will be earned).¹ Or (3), they may enter into a contract to pur-

¹ It will be noted that the interest earned on both these types of holdings is incidental to the main purpose of speculating for a rise in the dollar-sterling

chase sterling at a future date, at a price stipulated now, this contract not being offset or hedged by one in the opposite direction. Such a transaction is known as a purchase of forward exchange, of which more later.

Speculation for a decline in the exchange rate, on the other hand, may be carried out by entering into a contract to supply sterling at a future date at a price stipulated now (sale of forward exchange), or by drawing and selling long bills, the speculator waiting until later to provide the foreign currency necessary as cover. The latter operation was quite common in the United States before the War, when our heavy agricultural exports, concentrated as they were in the autumn, produced a fairly regular seasonal decline in the sterling rate of exchange. The sale of additional long bills two or three months in advance of this phenomenon, by increasing the supply of exchange, served to lower the rate at that time, while the necessity on the part of speculators of providing cover in the autumn, when these bills fell due, increased the demand and tended to support the sterling rate, thus evening out seasonal fluctuations.

Speculation in exchange to take advantage of seasonal movements in the rates is very common in relatively stable times, when alone such variations are clearly distinguishable. When conditions are disturbed, especially when currencies are unstable, speculation based upon expectations as to the future of a country's monetary and budget policy is common, and may exercise a notable effect upon exchange rates. Thus speculative anticipation of German currency depreciation resulted, at certain times in the years immediately following the War, in a more rapid and earlier fall in the external than in the internal value of the mark.

When fear of currency instability becomes acute or widespread, the speculative operations of exchange dealers may be reenforced by a panic flight of capital from the weak currency. In the short-term international loans previously considered, on the other hand, the principal objective was to gain from differences in the interest rates in the two money markets. Here the speculative element involved in the possibility of exchange-rate fluctuations was incidental to the main purpose.

rency, when everyone possessing liquid funds in that country attempts to buy the exchange of a safer center. This phenomenon was well illustrated by the rush to transfer capital out of England in 1931, and by a similar drain of resources from France in 1935-36, leading in both events to the abandonment of the gold standard by these countries.

Having now surveyed the important sources of the demand for and supply of foreign exchange, it is convenient to introduce a brief summary in tabular form, assuming the point of view of a buyer or seller in the New York market.

SOURCES OF DEMAND FOR FOREIGN EXCHANGE

1. Commercial transactions:
 - (a) Commodity imports.
 - (b) Services (shipping, insurance, communications, banking, etc.) rendered Americans by foreigners.
 - (c) Expenditures of American tourists traveling abroad.
 - (d) Earnings (interest and dividends) on foreign-owned American securities.
 - (e) Miscellaneous transactions: immigrants' remittances, foreign expenditures of the United States government and of American charities, etc.
2. Financial transactions:
 - (a) Long-term investments in foreign securities, or repurchase of foreign-owned American securities.
 - (b) Short-term loans by American to foreign borrowers, or repayment of American short-term borrowings from abroad.
3. Speculative transactions:
 - (a) All speculative purchases of a foreign currency for a rise, involving "going long" of that currency.
 - (b) Flight of capital from the United States.

SOURCES OF SUPPLY OF FOREIGN EXCHANGE

1. Commercial transactions:
 - (a) Commodity exports.
 - (b) Services rendered by Americans to foreigners.
 - (c) Expenditures of foreigners traveling in the United States.
 - (d) Earnings on American-owned foreign securities.
 - (e) Miscellaneous items involving payments by foreigners to Americans.

2. Financial transactions:

(a) Long-term investments in American securities by foreigners, or their repurchase of American-owned foreign securities.

(b) Short-term loans by foreigners to American borrowers, or repayment of American short-term loans to foreigners.

3. Speculative transactions:

(a) All speculative sales of a foreign currency for a fall in its dollar value, involving "going short" of that currency.

(b) Flight of capital from a foreign center.

THE BALANCE OF PAYMENTS

Up to this point, each of the sources of a demand or supply of foreign exchange has been considered singly. Clearly, all of them taken together, if the list is comprehensive, cover all the inward or outward payments to be made across a nation's boundaries. In accounting terminology, these items — exports, imports, services, loans, and so on — constitute the debits and credits in the international accounts of a country. Now such a whole scheme of payments for a single nation, including all debits (amounts payable) and credits (amounts receivable), is usually characterised by the term "balance of payments." Such a balance of payments, or itemised statement of the international accounts of a country, may be drawn up to cover any period of time one desires, though the ones most commonly published are annual balances. On the following page is shown the balance of international payments of the United States as published by the Department of Commerce.

It should be observed that the word "balance" means just what it says — a balance of payments, whatever the length of time covered, always balances. This must be so if the statement is really comprehensive. If a nation sells more goods, services, or securities to the rest of the world than it buys from it, during any day, month, or year, the difference will appear in the international statement of accounts or balance of payments as an amount owed to it by foreigners. This credit, or balance due, may take the tangible form of a

BALANCE OF INTERNATIONAL PAYMENTS OF THE UNITED STATES, 1935-36
(In Millions of Dollars)

Item	1935			1936		
	Receipts from Foreigners for "Exports" (Credits)	Payments to Foreigners for "Imports" (Debits)	Net Credits (+) or Debits (-)	Receipts from Foreigners for "Exports" (Credits)	Payments to Foreigners for "Imports" (Debits)	Net Credits (+) or Debits (-)
Trade and service items:						
Merchandise	2,283	2,047	+ 236	2,456	2,422	+ 34
Merchandise adjustments	105	86	+ 19	66	41	+ 25
Freight and shipping	63	99	- 36	68	129	- 61
Tourist expenditures	117	409	- 292	125	497	- 372
Immigrant remittances	5	92	- 87	5	115	- 110
Charitable, educational, and other contributions	—	28	- 28	—	32	- 32
Interest and dividends	521	171	+ 350	568	238	+ 330
War-debt receipts	—	—	—	1	—	+ 1
Government transactions (excluding war-debt receipts)	28	84	- 56	30	96	- 66
Miscellaneous services	129	52	+ 77	164	66	+ 98
Total trade and service items	3,251	3,068	+ 183	3,483	3,636	- 153
Gold and silver:						
Gold exports and imports	2	1,741	- 1,739	28	1,144	- 1,116
Gold earmarking operations (net)	—	—	—	—	—	+ 86
Gold movements (net)	—	—	- 1,739	—	—	- 1,030
Silver exports and imports	19	355	- 336	3	183	- 180
Total gold and silver movements (net)	—	—	- 2,075	—	—	- 1,210
Capital items: ^b						
Long-term capital movements ^c	1,991	1,529	+ 462	3,475	2,717	+ 758
Movement of short term banking funds (net)	—	—	+ 970	—	—	+ 404
Miscellaneous capital items (net)	—	—	+ 105	—	—	- 12
Paper currency movements	31	31	—	57	35	+ 22
Total capital items (net)	—	—	+ 1,537	—	—	+ 1,172
Residual item (net)	—	—	+ 355	—	—	+ 191

^a This item consists roughly of three parts: (1) exports and imports of goods for which data are available but not recorded in the official trade figures (e.g., ships, bunker-fuel purchases and sales, etc.); (2) goods whose export or import is wholly or partly omitted from official trade data (e.g., unrecorded parcel-post shipments, goods smuggled into the country, etc.); (3) corrections of certain recorded trade figures to allow for possible overvaluation (in case of goods sent on consignment) or undervaluation (in case of imports subject to ad valorem duties), uncollectible accounts, etc.

^b Capital items are viewed as "exports" and "imports" of evidences of indebtedness.

^c This item takes account of all reported security movements between the United States and foreign countries and includes international sales and purchases of long-term issues, new underwriting, sales and purchases of properties not represented by security issues, and security transfers resulting from redemption and sinking-fund operations.

Source: The Balance of International Payments of the United States in 1936, U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce.

short-term loan, or it may simply consist in an addition to the foreign balances of exchange dealers. In any event, it is a definite obligation of foreign debtors to creditors of the nation in question. In case an excess in a given nation's sales of goods, services, or securities is paid for by shipments of gold from the rest of the world, inclusion of the gold in the international accounts will show them to balance. Owing, however, to the fact that gold is used internationally as money, it is generally — unlike other metals, which are regarded simply as commodities — listed separately from merchandise in the statement of a country's international accounts. An excess of visible and invisible exports offset by an import of gold is regarded as a "favorable" balance. In such a case, however, the accounts exactly balance. It is merely because gold is treated differently from other commodities that it is possible to speak of an excess on one side or the other. It would be less misleading, though contrary to common usage, to refer to the import of gold as being bought by the excess of merchandise or other exports.

Various classifications have been applied to the items making up the balance of payments.¹ One of the commonest divides them into the categories visible and invisible. Visible items consist of all those things that could be seen by an observer to move in ships and trains across national boundaries and into customs houses — in other words, merchandise or goods. All other items — shipping services, the service of capital, loans, and so on — not being tangible, physical objects, fall into the category of invisibles.

For many purposes, a more useful classification is one which distinguishes between payments for goods or services currently received, where the making of the payment completely closes the transaction, and payments arising out of lending and borrowing transactions, where an international

¹ In the foregoing discussion of the sources of demand and supply of exchange, we adopted a classification convenient to our purposes, which grouped the component items on both sides of the balance of payments according to the nature of the forces underlying them.

obligation continues to exist. Under such a classification, the items in the balance of payments appear as follows:

Current transactions:

1. Merchandise sales or purchases.
2. Services rendered or received.
3. Tourists' expenditures, immigrants' remittances, etc.
4. Interest or dividend receipts or payments.
5. Exports or imports of gold.

Capital transactions:

1. Long-term lending and borrowing.
2. Short-term lending and borrowing.

One, though by no means the only, modern relic of mercantilism is to be found in references to a favorable or unfavorable balance of *trade*. If the merchandise exports of a country exceed its imports, it is said to have a "favorable balance of trade"; if imports exceed exports, the balance is "unfavorable." This terminology arose out of the mercantilist predilection for gold; an excess of exports brought in gold, hence such a balance of trade was favorable, and *vice versa*. Though we have seen that there is no reason for regarding imports of gold as especially desirable, the prejudice in favor of a "favorable balance of trade," as well as the terminology, lingers on. American business men and popular "economists" regarded our large favorable balance in the post-War years with satisfaction. They little realised that this excess of exports over imports was made possible because we were willing to take invisible items, foreign securities, in large quantities in exchange for them. When during the recent depression many of these securities went into default, the "favorableness" of our earlier balance of trade no longer seemed quite so apparent to them. A more suitable way of characterising an excess of exports or of imports would be to speak of an export balance of trade or an import balance of trade. These terms, because they are more accurate, avoid the implication of approval or condemnation involved in "favorable" and "unfavorable."

It should be clear that the terms "favorable" and "unfavorable" possess any meaning at all only when applied to the balance of *trade*. To refer to a favorable or unfavorable balance of *payments* would be meaningless, for the balance of payments always balances — there is nothing left over to which to apply the terms "favorable" or "unfavorable." There is, we must grudgingly admit, one sense in which such a characterisation might have meaning. If we added up all the explicit items due to a country and subtracted them from all the items due to foreigners, we might find a net difference unaccounted for. This would be found to exist, however, in the form of an increase in bank balances — either foreign-owned domestic balances or home-owned foreign balances. If in favor of ourselves, we would call this net balance a favorable one; if in favor of foreigners, we would call it unfavorable.

CHAPTER VIII

THE FOREIGN EXCHANGES: DETERMINATION OF THE RATE OF EXCHANGE

FROM time to time in the previous discussion reference has been made to the rate of exchange and the forces determining it. We are now ready to examine this problem.

Each commercial or financial transaction conducted across a national boundary gives rise, as we have seen, to a demand for or supply of foreign currency, or foreign exchange. All such international transactions of the residents of a given nation, taken together, make up its international balance of payments and furnish also the total demand for or supply of foreign currencies. Meeting in the foreign-exchange market, these demands and supplies there determine, as is usual with the forces of demand and supply, the price of the thing against which they are directed. In this case, the price determined is the price of a foreign currency — the amount of domestic currency which must be given for a unit of foreign currency.

The reactions of demand and supply in the foreign-exchange market are the same as in any other. Thus, if, owing to imperfections in the market, a rate of exchange is temporarily established at which demand exceeds supply, the competition of buyers drives the rate up, thereby cutting off some of the demand and increasing the supply, until equilibrium is established. On the other hand, if temporarily a rate above the equilibrium level were to rule, the competition of lower-priced sellers would cause it to fall until equilibrium was reached, in the process eliminating high-priced sellers and attracting into the market additional buyers. Again,

as in any market, an increase in demand (in the schedule sense) would tend to cause the rate of exchange to rise, this rise being moderated by additions to supply. An increase in supply, on the other hand, would tend to cause the rate to fall, this fall also being moderated by additions to demand.

Since by "balance of payments" is meant merely the entire array of debit and credit (or demand and supply) items between one country and others, the demand-supply analysis of the determination of the rate of exchange may be stated in terms of the balance of payments. Thus when an equilibrium rate is established and demand and supply are equal, the balance of payments is brought into balance. We cannot then speak of a favorable or unfavorable balance unless some item, such as short-term loans or inter-bank indebtedness, is left out of account. Further, we may also say that the exchange rate is determined by the balance of payments, with the understanding (1) that in the process of attaining an equilibrium position, changes in the rate will affect this balance both on the debit (demand) and credit (supply) side, and (2) that a change in either the debit or credit side of the balance of payments will affect the other side as an incident in the establishment of equilibrium.¹

"AUTOMATIC CORRECTIVES" OF EXCHANGE RATE FLUCTUATIONS

The fact that variations in the rate of exchange² tend to be self-limiting, in that they affect the balance of payments in such a way as to check their own movements, has led to the

¹ Admittedly, this brief discussion of the determination of the rate of exchange is superficial, providing as it does only a summary picture of the forces operating in the exchange market. Its purpose, however, is mainly to emphasise the fact that a foreign-exchange rate is merely a price determined, like any price, by the market forces of supply and demand, and to indicate the chief components of these forces. In the two succeeding chapters, a more detailed account of the causes of changes in these supplies and demands will be provided, as well as an analysis of the outstanding differences which characterise the foreign exchanges under gold-standard and inconvertible-paper-currency conditions.

² In what follows, the "rate of exchange" will be used to signify the price of a foreign currency in terms of the home currency. Where this usage is departed from for any special reason, clear indication will be given of that fact.

use of the term "automatic correctives" in describing these reactions. Thus a rise in the rate of exchange evokes various forces which act as "automatic correctives" of the rise and bring it to a halt.

This sounds more formidable and mysterious than it really is. All that the term refers to is the elasticity in the demand or supply of exchange. Thus if there is an increase in the demand for foreign exchange (or, alternatively expressed, in the debit side of the balance of payments), the rate of exchange will rise as much as the demand price has risen only if the supply of exchange is absolutely inelastic (*i.e.*, if the supply curve is a vertical line).¹ If it possesses any elasticity whatever — if the supply forthcoming increases as the rate goes up — the rise in the rate will be checked, or "automatically corrected." Moreover, it is clear that the more elastic is the supply of exchange, the smaller will be the increase in the price of foreign currency corresponding to any given increase in demand. Elasticity in the demand for exchange, on the other hand, checks a decline (or rise) in the exchange rate in the face of an increase (or decrease) in the supply. The effect of this "automatic corrective" will vary directly with its own strength: that is, the more elastic is the demand for foreign exchange, the less will the rate of exchange fall or rise as supply increases or decreases.

It is impossible to make any *a priori* statement with respect to the probable elasticity of the demand or supply of foreign exchange, for the reason that both of these schedules are composites of many different items (the various elements making up both sides of the balance of payments) whose relative importance will vary greatly from country to country

¹ An increase in demand may be interpreted as a willingness to buy larger quantities at each price in the old demand schedule or to pay higher prices for the same quantities. Thus, using the latter interpretation, if £1,000,000 of sterling is initially demanded at \$5.00 per pound, an increase in demand might raise the demand price for this quantity of sterling to \$5.50. With a perfectly inelastic or vertical supply curve, the rate of exchange would become \$5.50. The presence of any elasticity whatever in the supply would result in the intersection of the new demand curve at some lower point; the rate of exchange could not rise as much as the demand price had risen.

and from time to time.¹ The basis for judging the probable elasticity of a country's demand and supply of foreign exchange must be found in an analysis of the composition of its balance of payments, together with a consideration of the probable elasticity of each of the separate components. We may develop the latter point at this juncture by means of a few illustrations.

Consider the effect on the component parts of demand and supply of foreign currency of a rise in the rate of exchange, this rise being provoked either by an increase in the demand or a decrease in the supply, or by the fact that the previously existing rate was below the equilibrium level, with a demand in excess of supply. (It goes without saying that the effects of a decline in the rate of exchange will be the opposite of those described here.)

(a) *Exports.* — Exporters, with a supply of bills (say sterling) to put on the market, will receive a premium at the new higher rate. Hence they will be tempted to draw such bills earlier than they had planned (*e.g.*, by drawing long bills now instead of sight bills later).² Moreover, the receipt of more dollars for their sterling currency than they had perhaps anticipated will stimulate a shading of prices to foreign buyers, thereby, if demand be elastic, evoking a larger supply of bills. It appears, then, that this source of exchange supply is likely to be rather elastic.

(b) *Imports.* — A higher rate of exchange means that importers will have to pay more for bills. So far as they are able, therefore, they will attempt to postpone payment to a later date, unless it appears that the rise is apt to be

¹ There is one general consideration which governs the degree of elasticity of a country's demand and supply of exchange: namely, the relative stability or instability of foreign exchange rates themselves. This affects principally short-term loans and the demands for or supply of foreign balances forthcoming from bankers and dealers, and will be dealt with more in detail in Chapter IX.

² This effect will be chiefly felt if there is reason to believe the rise in the exchange rate is likely to be succeeded by a decline. On the other hand, if the initial rise promises to be merely the first stage of a rather prolonged upward trend, exporters will presumably postpone their sales of bills as long as possible, to take advantage of a still more favorable price for foreign currency. We have in mind here primarily a single increase in the rate, not a steady rise therein.

prolonged. Since goods cost them more, they will reduce their orders, which will mean that the demand for foreign means of payment will be smaller in the near future.¹ It may be that importers will first pass on the higher costs of exchange to consumers in the form of higher prices of imports. This, however, merely involves a delayed fall in orders, since at higher prices, a smaller quantity of goods will be taken.

(c) *Services.* — The volume of both inward and outward payments for international services (e.g., freight and insurance) at any time depends on the volume of goods moving at that time. Consequently the demand for bills from this source would decline and the supply increase, with a rise in the rate of exchange, in proportion to the effect of this same cause upon imports and exports. In addition, some flexibility might arise from the postponement of outward payments and the shading of charges for services rendered foreigners.

(d) *Tourists' Expenditures, etc.* — So far as exchange-rate fluctuations are confined within fairly narrow limits, the demand of tourists for foreign currencies may be supposed to be rather inelastic. When, however, the fluctuations are considerable (as may be the case between countries with unstable currencies), tourists may postpone foreign travel when the rate is high, or alternatively, plan to spend more economically. (With a low rate of exchange, more people will probably travel, and most travelers will be inclined to purchase foreign currencies more freely because of the bargain offered by foreign travel.) Immigrants' remittances and charitable contributions, on the other hand, would appear to be more rigid.

(e) *Long-Term Loans.* — A rise or fall in exchange rates will have an effect on long-term international investment similar to that on commodity trade. A rise in the dollar-sterling rate, for example, assuming no change in relative long-term interest rates to take place, will make British securities more costly to Americans, American securities

¹ "In the future," because payment does not have to be made when the order is placed, but only upon receipt of goods.

cheaper to British investors. Therefore American purchases of British securities will be retarded, British purchases of American investments stimulated. A fall in the dollar-sterling rate would obviously have the opposite effects.

The shift in international investment thus evoked will naturally tend to bring about a change in long-term interest rates in the two markets. In the case considered, British securities will tend to fall, American to rise in price. A fall in the prices of securities, however, at least so far as concerns those of the fixed-income type, is the same thing as a rise in the long-term rate of interest, and *vice versa*. With a higher long-term rate in England, a lower one in the United States, the immediate effects of an increase in the dollar-sterling rate will be counteracted; the flow of international long-term investment will be stabilised at a new level.

(f) *Interest Payments.* — The demand for or supply of exchange on this account is to pay or collect for interest due on past loans. Such charges must be met at the stipulated time; consequently one may say that both the demand and supply from this source are insensitive to exchange-rate fluctuations. The particular manner in which a large percentage of international interest payments are handled, however, gives some flexibility to this item in the face of movements of the exchange rate. Many American corporations, for example, who have to make periodic interest (or dividend) payments to foreign security owners, arrange with foreign banks to meet these charges for them. Reimbursement of the banks is taken care of by the purchase of a draft, timed to arrive when the interest charges fall due. With a rising rate of exchange, such corporations would be tempted to arrange postponement of the reimbursement until a later date. Essentially, the foreign banks would be making short-term loans to the American debtors. The effect, however, is to reduce the demand for exchange when the rate is rising, unless, of course, there is reason to expect this rise to continue.

Interest payments due to Americans usually result in a demand for dollars abroad rather than a supply of foreign

currencies in our exchange market, since the initiative is ordinarily taken by the debtor. The situation imagined above, of a rising price of foreign currencies in dollars, appears to the foreigner as a falling price of dollars. Hence the tendency for him would be to purchase dollars in advance of outlays for interest. Such an increased demand for American currency abroad is tantamount to an increase in the supply of foreign exchange in the United States.

(g) *Short-Term Loans.* — It is short-term loans, both those made for purely financial and those made for speculative reasons, that provide, at least under conditions of reasonable exchange stability, the greatest elasticity to the demand and supply of foreign exchange. For reasons which may be more appropriately advanced in the next chapter, a variation in the balance-of-payments items other than short-term loans tends to bring about a change in relative short-term interest rates. At the same time, of course, a rise or fall of the exchange rate occurs. In response to both these consequences, an international movement of short-term funds tends to take place, on the one hand to take advantage of the altered relationship of discount rates (a financial movement), on the other hand to profit from the speculative possibilities inherent in the new level of exchange rates (a speculative movement).

These shifts of short-term funds between national monetary centers have been, even in periods of comparative stability, of very considerable volume, providing great elasticity to the demand and supply of exchange, and serving thereby to check (or "correct") fluctuations in the exchange rate. In times of financial instability and uncertainty, these movements have been of huge magnitude. On such occasions, they have acted rather as a seriously disturbing than as a stabilising factor.¹ This is particularly true in the case of a currency which all signs indicate is likely to depreciate (or

¹ We shall return to this topic in the next chapter. At the present juncture, we are more concerned with the normal than with the abnormal aspects of the foreign exchanges.

appreciate) markedly in the near future. For then the preponderance of speculative funds will shift to one side of the market or the other, while speculative considerations will overwhelm purely financial calculations. If depreciation, for example, is strongly anticipated, selling sentiment will be strengthened and buying sentiment weakened. The supply of exchange will be augmented and its elasticity increased, while demand will be diminished and made less elastic. The prospective decline in the currency's international value is thus hastened and even accentuated.

(Considering all the balance-of-payment items together, it appears that both the demand for and the supply of exchange of any country should have a considerable degree of elasticity, though this will of course vary with respect to both time and place according to the composition of the balance of payments.)

ARBITRAGE

In all the preceding discussion of exchange rates, it has been assumed explicitly that all payments between the United States and the rest of the world were handled by banks in New York and London, or in other words, that there was but one pair of foreign exchange markets. By this treatment, the transactions between the United States and any single foreign nation were merged with its dealings with all other countries in a general and all-inclusive balance of payments.

Now it is only such a balance of payments — *vis à vis* the rest of the world — that must balance. A single country cannot buy from foreigners in general more than it sells to them. Its demand for foreign currency must always equal the supply thereof at some rate of exchange. This conclusion does not apply, however, to the relations of a single pair of nations. The United States, for example, may in any one year owe far more to Japan than Japan owes her, or her claims on England may greatly exceed English claims on Americans. Only the totals of inward and outward payments need balance.

Though the assumption of one pair of exchange markets, acting, as it were, as a funnel for all international transactions of the United States, disturbs in no way the conclusions reached, it does do violence to the facts. For actually there are, of course, many different pairs of exchange markets between which payments are constantly being made in both directions. And likewise there is a separate rate of exchange for each pair of markets, as the dollar-sterling rate, the dollar-franc rate, the sterling-franc rate, the franc-mark rate, and so on.

Each specific rate and each separate pair of markets is, it must be observed, immediately subject only to the impact of the demand for and supply of exchange directly attributable to the dealings of the two countries in question. And such narrowly derived demands and supplies of exchange not only need not be equal but rarely are equal. It would be natural to conclude that the rate of exchange on a country which owes one much but is owed little should be low, while the rate on a country in opposite circumstances should be high. Such a conclusion would, however, be incorrect. For the rates of exchange between one nation and all the other countries of the earth are tied to a common level: that level of exchange rates which establishes equilibrium in the grand total of the balance of payments of the country in question. This tying-together is the result of profit-seeking operations of exchange dealers, known as arbitrage.

An illustration will serve to make clear the nature of arbitrage operations. Suppose that because British claims on Americans exceed American claims on British, the rate on London in New York is high, that for contrary reasons the rate on Paris in New York is low, while in Paris the rate on London is in an intermediate position, expressing an equality of national claims. In such a situation, it would pay exchange dealers in New York to sell drafts on London at the high rate, while purchasing sterling to cover these drafts in Paris, using therefor French funds bought in New York at the low price of francs. Needless to say, these operations,

by increasing the supply of sterling in New York, increasing the demand for francs in the same market, and increasing the demand for sterling in Paris, would tend to bring the rates into line with one another. Furthermore, this tendency would operate as long as the divergence between the rates offered any profits from arbitraging. In this way, all exchange rates are closely linked, the rates between any one country and all others tending toward a level (hitherto typified by the dollar price of sterling) that establishes equilibrium in that country's balance of payments.

FORWARD FOREIGN EXCHANGE

Even under monetary systems (*e.g.*, the gold standard) providing the maximum of exchange stability, exchange rates do fluctuate, though within narrow limits. With independent paper currencies, exchange rates may and often do vary widely. The possibility of such fluctuations creates a risk; as usual in such a situation, ways and means have been devised to avoid the risk. (In the foreign exchanges, this device is to be found in the practice of buying and selling future or forward foreign exchange.

When a given exchange rate is low, those who have foreign payments to make in the future may desire to protect themselves against a possible rise in the rate by acquiring command over foreign currency *now*, particularly provided they do not have to make any present outlay of their own money. This desire may be met by entering into contracts with exchange dealers calling for the delivery at a future date of foreign currency, payment to be made then at a price in domestic money stipulated now. At a high rate of exchange, individuals having claims to foreign currency falling due in the future may protect themselves against a drop in the rate in a similar manner, by promising future delivery of a supply of bills to dealers, at a price stipulated when the contract is made.

But what determines the price paid for purchases or sales of forward exchange? To answer this question we must examine

more closely the part played by dealers. When a dealer agrees to deliver foreign currency at a future date, it will be essential for him, since he is a dealer and not a speculator, to cover himself by acquiring foreign funds at once at the current or "spot" rate of exchange. Thereby he avoids the risk of a rise in the price of foreign money. At the same time, however, he transfers his liquid domestic funds into a foreign balance. The loss or gain from holding funds abroad rather than at home will depend on the relation between the short-term rates of interest in the two money markets. If the interest rate is higher in the foreign market, dealers will be willing to sell forward exchange at a discount from the spot rate measured by their excess earnings abroad for the period of the forward contract, less a commission.¹ If the short-term interest rate is lower in the foreign market, the forward selling rate will exceed the spot rate by a premium equal to the deficiency in earnings abroad, plus a commission. Purchases of forward exchange by dealers will, of course, be made at a premium when the interest rate is higher abroad, at a discount when it is lower, since purchases must be covered by the current sale of foreign currency at the spot rate. This is necessary to avoid the risk of a future fall in the price of foreign money. It has the effect of transferring funds to the domestic money market, the opposite of the covering operation accompanying a forward sale.

Ordinarily dealers will, of course, be making sales and purchases of forward exchange concurrently. If opinion as to whether the future trend of the exchange rate is upward or downward is evenly divided, sales and purchases will cancel. If, however, owing to distrust in the foreign currency or to anticipated unfavorable changes in the foreign country's

¹ The following illustration may serve to clarify this conclusion. Suppose the spot rate for dollar-sterling exchange is \$5.00, the short-term interest rate in London 6%, in New York, 4%. The earnings on \$5.00 (£1) in London for, e.g., 90 days, will then be \$.075, in New York, \$.05, an excess in London of \$.025. Subtracting from these excess earnings a commission of $\frac{1}{2}\%$ (\$.00625) gives a *discount* for the forward selling rate over the spot rate of \$.01825, making the former \$4.98175. The addition of a similar *premium* (excess earnings less commission) to the spot rate gives a forward buying rate of \$5.01825.

balance of payments, a belief in a falling tendency predominates, an interesting situation develops. This has been well expressed by another writer as follows:

If there is a lack of confidence in the future of a currency, those who wish to sell it forward will exceed those who wish to purchase it forward. The spot sales of forward dealers covering themselves will exceed spot purchases, and the opinion about the future of the currency is thus reflected in a present excess of supply over demand and a weakening in its spot quotation. This shadow, which the future casts before it, is particularly important in the case of currencies the exchange in which is not stabilised.¹

SUMMARY

Since a survey of the general principles of foreign exchange has now been completed, it is time to summarise the results. Beginning with the mechanism by which payments are made across national boundaries, we saw that the means resorted to was the use of bills of exchange, these bills being bought and sold by a specialised class of dealers. Persons owed sums of money by foreigners for goods or services drew bills for definite amounts in foreign currency, ordering the foreign debtor to pay these to a third party, usually a foreign bank. These bills were purchased by exchange dealers in the home country with domestic currency or bank balances, the dealers thereby building up abroad balances of foreign funds. Importers or others owing money to foreigners purchased, with home currency, drafts or bills on the foreign balances thus built up, in this way making the payments due and at the same time depleting the foreign balances of dealers. Basically, it was seen that the foreign exchange banks or dealers took over the debtor-creditor relationship of international buyers and sellers, and that this action not only permitted an efficient means of transmitting payments, but also resulted in a substantial clearing of the great bulk of these payments.

Each of the main items of international transactions was next examined in its relation to the foreign exchange market,

¹ R. F. Harrod, *International Economics*, p. 94. In the main, Mr. Harrod's excellent discussion of forward exchange has been followed in the above account.

to see whether or under what conditions it gave rise to a demand for or supply of bills of exchange. At the same time, the conditions governing the size of each class of inward or outward payments were briefly considered. These various sources of a demand for or supply of bills of exchange were then shown to make up the items in a nation's balance of payments, and various classifications of these items were enumerated.

Finally, the price paid for foreign currency by exchange dealers, or the rate of exchange, underwent examination. As a price, it was seen to play the usual role, tending to attain such a level as to produce equilibrium in the demand for and supply of foreign balances. Again, like any price, it was seen to be determined by the forces of demand and supply meeting in the market.

In arbitrage operations appeared a force linking all exchange rates together, while in dealings in forward exchange the present and the future were seen to be connected.

SUGGESTED REFERENCES

Whitaker, A. C., *Foreign Exchange*, Chapter XXIII.
Whale, Barrett, *International Trade*, Chapter II.
Harrod, R. F., *International Economics*, Chapter V.
Griffin, C. E., *Principles of Foreign Trade* (The Macmillan Co., New York, 1934), Chapters V-VI.

CHAPTER IX

THE MECHANISM OF INTERNATIONAL ADJUSTMENT UNDER GOLD-STANDARD CONDITIONS: SHORT-RUN PROCESSES OF ADJUSTMENT

THE technique of making international payments, the part played by the foreign-exchange markets in connection with this technique, and the forces determining any given foreign-exchange rate were considered in the preceding chapter. This analysis was limited in two ways: it was concerned only with the general principles underlying the money mechanism of international transactions, and it studied only the normal, undisturbed operation of that mechanism. It is now time to apply the results of our study to different types of monetary systems, and to consider how and to what extent adjustment is made to disturbances of international equilibrium.

Perhaps the most important and certainly the most prominent monetary system is the one to which the bulk of the civilised world has in effect adhered during most of the past sixty years: the gold standard. It is the purpose of this chapter to examine the functioning of the foreign exchanges under gold-standard conditions, and to study the means by which, under those conditions, adjustment is made to disturbances in the flow of international payments. Before considering these matters, however, it is necessary to get some idea of the characteristics of the gold standard, as well as at least a rudimentary understanding of the banking system in a modern civilised state.

THE GOLD STANDARD

What is meant when it is said that a country is on the gold standard, the silver standard, or the paper standard?

Clearly the reference is to the money system of the country in question. Such a statement means that in some way the country's money is linked with gold, with silver, or with paper. But more specifically, what is the exact nature of this connection? Under the gold standard, in particular, what is the precise relationship between gold and money?

In answering these questions, it is well to begin by reminding ourselves that one of the chief functions of money is to serve as a measure of value. Through its use, commodities and services may be readily and quickly compared as to their economic values. This power to command other goods in exchange is put in general, easily-understood terms when it is expressed as a money price. The prices of specific goods and services are simply concrete measurements of value, derived by using money as the instrument of measurement.

Now in any system of measurement, whether of length, weight, or value, it is essential to have a definite basis of reference, some ultimate criterion, in a word, a *standard*. For the measurement of length, there exists a truly international system, the metric system. In this system, the unit or instrument of measurement is the metre. The ultimate criterion or standard is a platinum bar of arbitrarily defined length, kept under carefully controlled conditions in a laboratory in Paris. All the ordinary metre bars and tapes are made as nearly as possible equal in length to this standard bar, clearly creating a situation superior to that existing in the days when the arm or foot of the ruling king furnished a strictly local and temporary standard of linear measurement.

For the measurement of value, there never has existed as uniform an international system as has been furnished for linear measurement by the metric system. Each country jealously cherishes its right to name and define its own monetary unit. Thus we have the pound, the dollar, the franc, the mark, the zloty, and so on almost without end. Yet system and standard each country, after its own fashion, does possess. A monetary system consists of these elements: the money unit, its multiples and fractions; the various kinds of

money in circulation ; and the relation they bear to the defined standard. The standard, in turn, is simply that particular kind of money established by law or custom as the ultimate basis of reference for all money. The peculiar need for a standard, in the realm of money, is made evident by the fact that in many countries there are several different kinds of money. Thus in the United States we have United States notes, Federal Reserve notes, silver certificates, silver dollars, and subsidiary coins (together with a few other quantitatively unimportant items), while alongside of these different types of currency circulate bank deposits subject to check. (Checking deposits may be regarded as money or as substitutes for money, according to the rigor with which money is defined.)

When the monetary standard is gold, the ultimate standard of value becomes a defined weight of gold. Thus in the United States prior to March 6, 1933, the gold dollar consisted of 23.22 grains of fine gold or 25.8 grains of gold $\frac{1}{10}$ fine, and served as the final basis of reference of all other dollars. After January 31, 1934, when President Roosevelt signed the devaluation proclamation, the gold dollar was redefined as 13.71 grains of fine gold or $15\frac{5}{11}$ grains of gold $\frac{1}{10}$ fine.

Merely specifying by law that the currency unit shall consist of so much gold is insufficient, however, to establish the gold standard effectively. For the gold standard really to exist, in the sense that gold is the true standard of value, it is necessary that the value of the currency unit (*any* unit) and the value of the defined weight of gold be kept equal to one another.¹ This end may be attained by any one of three means.

Before the World War, the commonest device for maintaining equality between the value of the currency and that of gold was free (*i.e.*, unlimited) coinage and conversion (the gold currency system). If gold money was always obtainable in exchange for any other kind of money, dollar for dollar or pound for pound, or if, on the other hand, paper money or subsidiary coins could always be secured upon the offer

¹ Cf. Robertson, *Money*, Chapter IV.

of gold, the two types of money could never vary from one another in value.

Since the War, however, another method has become more common, under which no actual gold money circulates from hand to hand, as it does when the rule of free convertibility holds. This has generally been called the gold bullion system. It exists when gold in the form of bullion is freely bought or sold for currency by some central authority, at a fixed price. Thus in the law of 1925 reestablishing the gold standard in England, the Bank of England was required to sell gold at the fixed price of £3 17s. 10½d. an ounce. Its buying price was set at £3 17s. 9d. (This small difference is a technical matter, of little importance in this connection.) As long as gold could be freely obtained at the fixed selling price, or exchanged for currency at the buying price, the value of currency, in terms of gold, could only fluctuate within the narrow limits set by the difference between these prices.¹

Closely related to the gold standard proper is the gold exchange standard, which had a wide vogue shortly after the War. Instead of establishing convertibility between gold coins and currency, or of maintaining fixed buying and selling prices for the physical receipt or delivery of gold, countries adopting the gold exchange standard are prepared to buy or sell *exchange* on some gold standard country at a fixed price (or at narrowly separated prices). By this means the currency of such a nation is linked with that of the country using gold. In place of convertibility of currency into gold, there exists convertibility of domestic money into gold-standard money. This is an economical — and, so long as the anchor country remains on gold — a safe substitute.

¹ Since the devaluation of the American dollar, this country has introduced a variation of the gold bullion system, which might well be termed a limited gold bullion system. Under our laws, gold is both bought and sold at the fixed price of \$35.00 an ounce, though not without restriction. There are no restrictions upon its purchase by the Treasury, but this institution is only required to sell the metal to licensed buyers, for the purpose of bona fide use in industry or for shipment in the settlement of the international obligations of central banks. Since these are the two chief uses of gold, the introduction of this restriction in no way hinders the maintenance of equality in the value of gold and currency.

Up to this point, currency alone has been mentioned. But since the great majority of transactions in English-speaking countries and a large proportion in the rest of the world are conducted by means of bank credit rather than cash, it is essential to show the relation of this means of payment to currency and gold.

In a country which embodied the ideal of "hard-money" enthusiasts, namely one where the only circulating medium consisted of gold coins, each individual would provide his reserves (against unforeseen contingencies and against a failure of income to equal outgo at all times) in the form of hoards of coin. The introduction of prudently managed banks, ready to accept deposits of cash in exchange for checking accounts and to extend loans to productive enterprise, would probably see most of the individual cash hoards pouring into their tills. Banks are generally much safer places to keep cash reserves than mattresses, buried tins, and corner cupboards, while the use of checks in making payments affords a great convenience.

If these banks followed a normal procedure, they would make loans, since these form the chief source of income for banks, and in so doing, would create deposit liabilities. In order to be in a position to honor these liabilities in cash, they would establish some definite percentage of cash to deposits, endeavoring never to permit the actual cash-deposit ratio to fall below this figure. Any single bank holding more than sufficient cash to maintain this ratio could lend out the surplus, and so far as it responded to the profit motive, it would lend it. All banks taken together, because of the operation of the well-known mechanism of the multiple expansion of deposits, could expand loans until the normal cash-deposit ratio was reestablished.

A banking system such as that just described, with a number of independent unit banks, each carrying its own gold reserve against deposits and with all of them — since they are operating under the stimulus of the profit motive — fully "loaned up" to the limit of the legal or customary reserve ratio, has

been variously characterised as a "natural" banking system, as an "automatic" gold standard, and as a "pure" gold standard. The pre-War banking system of the United States was of this nature.

Just as the introduction of bank deposits as means of payment brought great economy in the use of cash and improved efficiency in the task of making payments, so a further step in economy and efficiency may be taken if there exists in the community a central institution, a sort of bankers' bank, which can be relied upon always to furnish cash on demand. For then the numerous individual banks need no longer keep their own separate cash reserves, but may turn these over to the central bank for safe-keeping. *Their* reserves then become deposits in the central institution, which must, of course, maintain at all times what are believed to be adequate reserves of cash behind these deposits.¹

In such a set-up, cash (consisting, in a fully developed system, of gold, currency, and subsidiary coins) is relegated to a comparatively minor place. Gold, whether in the form of coins or bullion, will be needed only for the settlement of international balances. It stands a very good chance of disappearing almost altogether from circulation, as in the United States after the War, being asked for only in times of unreasoning panic and monetary uncertainty. Other forms of currency will pass out of the central bank into the tills of the commercial banks, from there to factories and farms for the payment of wages and to individuals who cash personal checks. As these people spend their wages, salaries, or other incomes, the cash previously drawn out from banks will return to them again, *via* landlords, retailers, filling stations, cinemas, and other types of business establishments. And the banks, having need for only a bare modicum of till money, will re-deposit any surplus with the central banking institution. During most of the year, this circulation of currency

¹ It might better be said that central banks attempt to maintain reserves above a conventional minimum, since, as recent experience shows, even substantially large reserves may on occasion be inadequate.

and coins will be a continuous in-and-out process, with the banks receiving about as much from the incoming stream as they pay out. At certain seasons of the year throughout the country, as at Christmas, or in certain localities, as in farming regions at harvest time, unusually large demands for cash will be made upon the banks. Upon these occasions, they will be forced to draw down their deposits at the central bank. Since, however, these deposits are the reserves of the commercial banks, and since the urge for profit will impel them to keep their reserves at the minimum prescribed by law or custom, to reduce them may be dangerous or illegal.

This brings us to the consideration of another aspect of a central bank's activities. If, as was intimated above, it is truly a banker's bank, what is to prevent it from performing for the commercial banks the same function that they performed for the various business establishments of the community, namely, that of making loans? By doing so it will enable them to augment their reserves above the minimum, thereby making it possible for them to be drawn against in satisfaction of the unusual seasonal demand for cash. Similar action will also permit the commercial banks to meet seasonal needs for an expansion of loans and deposits, or to meet a secular or long-run growth of the credit needs of the country.

If the central bank is to be capable of answering such legitimate seasonal or secular demands upon it, a definite requirement of such an institution becomes clear. It must at all times maintain its reserves, which are the ultimate cash reserves of the country, well above the absolute minimum of safety. Should this requirement not be met, then the appearance of even a seasonal need for additional currency would require a deflationary contraction of loans and deposits, with the almost certain sequel of falling prices, reduced business activity, and unemployment.

The necessity which rests upon a central bank of maintaining surplus reserves introduces a second requirement of

such an institution. It must not operate with a single eye to profit, but must conduct itself on the basis of a public or quasi-public institution. Were it to set as its sole goal the earning of a maximum return upon its capital investment, it could not fail to let its reserves drop to the safety minimum, through the simple method of expanding its earning assets and therewith its deposit liabilities. Hence if a central bank is to perform even its function of acting as the "lender of last resort" for the banking system, it must become something more than a mere business institution — an agency always placing public welfare above profits.

Thus far we have considered two separate functions of a central bank: its position as the holder and guardian of a country's ultimate cash reserves, and its place as the lender of last resort. With these tasks, central banks — perhaps best exemplified by the Bank of England — had become familiar before the World War. Since that time, both the pressure of circumstances and the growth of theoretical insight into the working of the monetary system, plus the growing realisation that they are really public institutions, have led central banks to undertake a further and more important obligation. This is the exercise of credit control. While economists and central bankers are not as yet in agreement upon the specific objectives of such control, it is generally agreed that excessive expansion or contraction of credit, and therewith the booms and depressions associated with these phenomena, should be avoided. Moreover, the *means* of checking an excessive credit expansion are well understood and accepted, though there is less unanimity of opinion as to the proper method of preventing a credit contraction.

To check a too rapid growth of the loans and deposits of commercial banks, a central bank possesses two principal weapons. If, to permit them to increase their lending, commercial banks must borrow additional reserves from the central institution, the latter can raise its discount rate, theoretically without limit, until the added cost of loans to

business borrowers (to whom the increased cost will be passed along) causes them to cut down their demand for credit. On the other hand, if commercial banks themselves already possess surplus reserves, or are acquiring them by one means or another, the central bank can take these reserves away from them by selling securities on the open market.¹ This process may be continued until the commercial banks are forced, in order to maintain their legal minimum reserves, to borrow at the central bank, at which time the discount rate will become effective.

Suppose, on the other hand, that owing to some shock to business confidence, a decline in loans, deposits, and business activity has set in, which threatens to turn into a general deflationary debacle. Interest in the public welfare will require the central bank to act in such a manner as to check this dangerous trend. It can lower its discount rate promptly to a nominal level and, by vigorously purchasing securities in the open market, provide the commercial banks with ample surplus reserves. They will then be free to lend at low rates of interest. These weapons (discount rate and open-market operations) are, however, likely to prove much less effective in checking a business recession than in arresting a boom. It is all very well to make borrowing *easy*, but quite another matter to make it *attractive*. And unless business men can be lured into borrowing and spending the proceeds to maintain the level of industrial production, the initial decline of deposits, business activity, and employment will tend to breed still further contraction, until the community is faced with a full-fledged depression. Something more than the conventional armory of central banks appears to be required to deal with such a situation. The further pursuit of this problem, interesting though it is, lies outside the field of our present study.

¹ The Banking Act of 1935 established in the United States a third important central banking weapon, by giving the Federal Reserve Board the power to increase the reserves required of member banks to as much as double the legal minima of 13, 10, and 7%. From May, 1937, until April, 1938, this authority was exercised to the maximum.

With this brief sketch of the different types of gold standards and of the leading characteristics of a modern banking system in mind, we may now turn to consider the manner in which the foreign exchanges function under gold standard conditions.

FOREIGN EXCHANGES UNDER THE GOLD STANDARD

It was made apparent in the last chapter that the economic transactions between one country and the rest of the world must, when the stage of making or receiving payment is reached, pass through the foreign-exchange market. In this market are focused the demand for and supply of foreign currencies, arising out of all conceivable varieties of dealings, from the transmission of funds to a Methodist mission in the Malay States to the purchase of Brazilian coffee or Russian caviar. The foreign-exchange market acts as a sort of bottle-neck, through which pass, with few exceptions, all commercial and financial transactions of international scope. Moreover, since purchases and sales of goods, loans, the demands of travelers, which are the very fabric of international economic activity, must pass through the foreign exchanges, so likewise most changes in the basic economic conditions of nations (*i.e.*, in the relative supplies of labor, capital, and natural resources, and in the demands of buyers) transmit their effects through this same bottle-neck.

(Now it is true that the sources of the demand for and supply of foreign exchange; and the underlying causes of changes in these demands and supplies, are the same under gold-standard and under paper-currency conditions.) Yet the nature of the foreign-exchange bottle-neck is strongly influenced by the nature of the monetary system of a country, while, in turn, the peculiarities of the foreign exchanges alter the impact of foreign economic forces, so that separate consideration must be given to the operation of the foreign exchanges between countries which are on the gold standard and those which possess independent paper currencies.¹

¹ The relations between gold-standard countries and paper-standard countries are the only ones discussed in detail in this book, though brief mention is later

(The distinguishing characteristic of the rate of exchange between two gold-standard countries is this: it is free to fluctuate within but very narrow limits) This relative rigidity of the exchange rate is simply one aspect of the more basic and equally rigid legal definition of the currencies in terms of fixed weights of gold. (It comes to the same thing if the law prescribes instead the price at which gold must be bought or sold.) Thus the pre-War dollar was legally defined to be 23.22 grains of fine gold, while the pound sterling, at the lawful selling price of £3 17s. 10½d. per ounce, contained 113.0016 grains. Therefore a pound was always the arithmetical equivalent of \$4.8666, this figure being the number of times 23.22 goes into 113.0016. Such a multiplier, or ratio between the weights of gold in two currencies, of course can be and is calculated for every pair of gold-standard currencies; it is known as the "mint par."

When gold is freely obtainable, or in other words, when the gold standard is fully maintained, there is established between each pair of gold-standard currencies a narrow zone of possible exchange-rate fluctuations centering on this mint par. Within this zone, actual movements of the exchange rate are strictly confined. Suppose, for example, that because of unusually large imports from Great Britain, the demand for pounds sterling is abnormally great. The sterling rate, as we saw in the last chapter, will rise — to \$4.87, \$4.88, \$4.89. But if, when the rate touches \$4.88, it costs no more to secure say \$4,866.70 worth of gold (the equivalent of £1,000 in England) from a bank, and to pay insurance and shipping charges on the shipment of that gold to London, than to buy bills of exchange in the market, then clearly the rate of exchange can go no higher so long as gold can be freely obtained from the banks. This rate is known as the "gold export point," and represents the upper limit to the rate of exchange on another gold-standard made of transactions between a country on the gold standard and others on a paper basis. The problem of the foreign exchanges under the silver standard is not considered. For a discussion of this, see Furniss, *Foreign Exchange*, Chapters III and V.

country. There is, of course, likewise a "gold import point." This is reached when (owing, let us say, to an abnormal supply of exchange arising from an excessive volume of exports) the rate of exchange goes so low that one realises just as much from a bill of exchange by sending abroad for payment in gold, insuring and shipping the gold to this country, as by selling it in the market.

The gold points depend, of course, upon the charges for insuring and shipping gold. This means that they are not invariable, though in normal times they alter but little. Moreover, since these charges are ordinarily but a small fraction of each unit of currency, the range between the gold points is very narrow, and the limit upon exchange rate fluctuations correspondingly restricted. In the late twenties, the costs of insurance and transport between London and New York fixed the gold export point for sterling at \$4.848, the gold import point at \$4.892, thus permitting a variation in the sterling-dollar rate of exchange over a range of less than 1%.

These, then, are the peculiarities of foreign exchange under gold-standard conditions. There is a basic rate of exchange, known as mint par, which expresses the ratio of the gold content of the two currencies.¹ On either side of mint par, there are gold points, or rates of exchange between which fluctuations in the actual rate are confined. Within these limits, however, the current rate of exchange is free to vary. Whatever level it attains at any given moment depends, as with any pair of currencies, upon the interaction of demand and supply. When, on the other hand, the demand or supply of the foreign currency so increases that the gold export or gold import point is touched, gold begins to flow out of or into the country. When either of these points is reached, any further increase in demand or supply serves not to raise or lower the exchange rate, but merely to augment the outward or inward movement of gold.

¹ There is, of course, no tendency for the actual rate of exchange to correspond to mint par, which is a "basic rate" only in the sense that it is the basis for calculating the range of possible exchange fluctuations.

THE MEANING OF EQUILIBRIUM: BALANCE OF PAYMENTS
EQUILIBRIUM AND "FULL" EQUILIBRIUM

The flow of gold into or out of a country, whether this flow be slow but steady and persistent, or sudden and violent, is clearly in some way related to the existence of equilibrium in that country's balance of payments. For a country on the gold standard cannot tolerate a continued loss of its monetary reserves, while their steady increase will ultimately present it with a difficult problem of credit control, probably requiring extraordinary measures if it is to avoid an inflationary boom. On the other hand, a sudden large influx or efflux of the precious metal indicates some sort of disturbance in its international payments. If these were truly in equilibrium, with all types of transactions proceeding smoothly and evenly, no gold flow would be necessary.¹

While a persistent or sudden abnormal movement of the money metal may be taken to indicate a lack of equilibrium in the economic relations of a given country with the rest of the world, it would be inaccurate to postulate the absence of such a gold flow as a proof of balance.¹ For a seriously disturbing element of one type, tending to produce a large abnormal movement of gold, may be offset for a considerable period of time by counterbalancing changes in other elements. Thus when Great Britain returned to the gold standard in 1925, the evidence indicates that her price level was too high in relation to prices in other countries, calling for a downward revision of domestic prices and costs if she was to maintain her share of world trade. In spite of the fact that the Bank of England maintained a relatively high discount rate, thereby exerting a deflationary pressure upon industry, costs, in particular wages, were too rigid to permit the necessary readjustment to be made. British exports failed to keep pace with the growth of world trade, and there was a steady

¹ "No gold flow" is too rigorous. In a world in which the output of gold is considerable, a nation which produces little or none will normally acquire a certain share of the world's annual production, while a country which is an important producer thereof will ordinarily export a substantial amount.

tendency for gold to leave England. Yet a large outward movement of gold did not develop, owing in part to the offsetting inflow of large amounts of short-term capital, attracted to London by the high discount rates current there.

As we shall presently see, when a change in the demand for or supply of foreign exchange takes place (*i.e.*, when a country's balance of payments is disturbed), such movements of short-term capital generally occur in advance of any flow of gold, serving as an effective means of preserving equality in both sides of the balance of payments. In other words, they may be said to fill in or adjust the gap in the balance of payments caused by a change in the size of other items on one or both sides of the international accounts. If of sufficient volume, they may obviate entirely the shipment of gold in settlement of a debit or credit balance. Thus it is possible to say, at least tentatively, that the presence of either of these adjustment items, short-term capital movements or abnormal gold flows, indicates that equilibrium in the balance of payments has been disturbed.

While this may provide a satisfactory criterion of disequilibrium in the balance of payments, it throws little light on the nature of such disequilibrium, nor does it furnish any basis for judging how long the period of adjustment may be expected to continue. Fully to understand these matters, we must go behind the surface manifestation of disequilibrium in the international accounts and investigate the causes thereof. We shall find that such disequilibrium is often rooted in some more fundamental type of disequilibrium within the economy.

In economic affairs in general, the term "equilibrium" means a state of balance of opposing forces, any departure from which tends to set those forces in operation to restore economic balance again. Applying this concept to a nation's balance of payments, we may say that it is in equilibrium not merely when both sides are equal, for they must always be equal, but when the various components (exports, imports,

services, investment, etc.) are moving in response to and are in stable adjustment with, their underlying determining forces (demands, relative supplies of the factors, costs of production, interest rates, etc.). Another way of expressing the matter would be to say that all the elements of the different related national price systems are in a stable relationship with one another. In such a situation there would be no tendency for any price to change, nor for any variation to occur in the flow of any of the objects (goods, services, capital) of international commerce. Now if such a stable set of relationships is disrupted by the introduction of a short-lived disturbance which has little or no effect on the underlying forces, the process of adjustment will tend toward the re-establishment of the original condition of the balance of payments. A disturbance which, on the other hand, itself changes the underlying determinants will set in motion a series of reactions resulting in the establishment of a balance of payments whose component items bear a different relation to one another.

The balance of payments of any country expresses in summary fashion all its economic transactions with the outside world. Disturbances therein may emanate from any of these transactions — from those in goods, in services, or in securities — and may be traced back to some form or other of disequilibrium in the economy of the nation whose balance of payments is involved, or in the economies of those countries with which it has economic relationships. Ignoring services and miscellaneous transactions and concentrating our attention on the trade in commodities and on international movements of capital, it is possible to distinguish four principal types of disequilibrium within a nation's economy which give rise to instability in the balance of payments. These may conveniently be called 1) trade disequilibrium, 2) industrial disequilibrium, 3) investment disequilibrium, and 4) monetary disequilibrium. We shall explain the meaning of these terms indirectly, by describing, in each instance, the characteristics of the corresponding state of equilibrium.

Trade equilibrium may be said to exist, with respect to a single traded commodity, when its price in any market exceeds its price at its point of production by no more than the costs of transfer.¹ As Pigou has expressed the matter, "For any commodity that does flow, exchange equilibrium requires . . . that a unit in the country of export shall buy a claim in the country of import to a unit *minus* the cost in transport, taxes, loss of interest and so forth involved in sending a unit there."² This amounts to saying that no possibility of arbitrage operations exists with respect to the commodity in question. When this condition is satisfied for all traded commodities, equilibrium with respect to the trade in goods may be considered to exist. So long as such an arbitrage possibility is present, the volume of goods moving between different countries will tend to increase, and the goods items in their balances of payments cannot be said to be in equilibrium.

Even though trade equilibrium in the foregoing sense existed, with no excessive price differentials between various national markets offering prospects of additional profits from international trade in goods, nonetheless it could still be true that industries producing for export were either more or less profitable (with respect to both home and foreign sales) than industries producing solely for the domestic market. In such a case, the attainment of equilibrium would require the movement of resources into or out of the export industries

¹ Subject to the exception of arbitrary limits to the movement of goods (import quotas, etc.) and of discriminating monopoly.

² A. C. Pigou, "The Foreign Exchanges," in *Quarterly Journal of Economics*, Vol. 36 (1922), p. 54. (Reprinted in *Essays in Applied Economics*, London, 1930.) Professor Pigou goes on to say, "For any commodity that does not flow between the two countries exchange equilibrium requires that a unit in one country shall exchange for a claim on a number of units in the other, not less than one unit *minus* the cost of transportation (including taxes) outwards, and not more than one unit *plus* the cost of transportation inwards." By taking into account commodities which are not traded, he develops a broader and more general theory than is necessary for our purposes here.

It will be noted that what I have chosen to call "trade equilibrium," to avoid confusion with the more general term "equilibrium in the balance of payments," he calls "exchange equilibrium." He uses the term "industrial equilibrium" in the same sense in which it is used here.

until a stable relationship between prices and costs was established, with a rate of profit (barring monopoly) no greater than that obtainable elsewhere. This condition of *industrial equilibrium* is clearly related to equilibrium in the balance of payments. Until it is established, a continuing tendency toward increased or decreased output will inevitably affect the volume of goods moving internationally.

Turning now to international capital movements, let us first consider long-term investment. Just as relative differences in the supply of labor in different countries give rise to varying rates of wages, the continued existence of which is perfectly compatible with trade and industrial equilibrium, so likewise international differences in the supply of capital may produce differences in long-term interest rates. These will be lasting provided there is some degree of immobility with respect to international movements of capital. That this is the case, brief reflection clearly indicates. Even ignoring risk factors, for which a premium in addition to the pure return to capital must be paid, unfamiliarity with foreign lands and investment opportunities, differences in laws and customs, the greater difficulty of supervising foreign investments, and a natural fear of the unknown are together sufficient to restrict considerably the international movement of long-term capital.¹

Now strictly speaking, investment equilibrium might be said to exist only when international differences in interest rates were just sufficient to neutralise the repugnance to investing abroad. Then it would be a matter of indifference to the investor whether he kept his capital at home or invested it in foreign lands, and there would be no tendency toward any net international movement of capital. Such an interpretation of investment equilibrium would put it on a par with our concept of industrial equilibrium, which we have

¹ An exception might have to be made in the case of Great Britain, particularly in relation to certain fields of foreign investment, since the British investment market is better organised to deal with foreign than with home investment. On this point, see the *Report of the Committee on Finance and Industry* (Cmd. 3897, 1931), Part II, Chapter IV.

seen consists in the absence of any tendency toward a movement of resources between industries.

We are here primarily concerned, however, with the mechanism of international adjustment to disequilibria (in the sense of changes) in the balance of payments. Any country's balance of payments (and back of this, its industrial and price structure) may become adjusted to a constant rate of flow of capital, in that no changes in prices or in the relative volume of production of different industries may be required. A disturbance of this rate of foreign investment, on the other hand, will require changes first of a temporary character and later of such a nature as to permit a continuance of the new rate of capital movement. It seems more in accord with the requirements of our problem, therefore, to consider international investment equilibrium as existing when long-term capital is moving into or out of a country at a steady rate — a rate, moreover, to which the price and industrial structures of the countries concerned have become adapted.

Such a continuing movement of capital will occur whenever conditions exist which establish a stable differential in national levels of long-term interest rates in excess of the differential which merely neutralises the attractiveness of domestic and foreign investment. So long as these conditions continue, there will tend to be a steady flow of capital from the country or countries with the lower rates of interest to the country or countries with the higher rates. This capital movement will then constitute a stable item in the balances of payments of the nations concerned and will cause no disturbance therein nor any need for changes of an adjusting nature. When, however, there occurs in one of these countries an increase or decrease in the demand for or supply of capital such as to alter relative interest rates, the rate of flow of capital will tend to change, the balance of payments will be upset, and adjustment will be required.

When we consider the international movement of short-term capital, on the other hand, we find a very different situation. The ease with which short-term funds may be moved

about from one financial center to another, given modern banking institutions, and the fact that this type of investment is available on demand, or within a very brief span of time, gives it a very high degree of international mobility.¹ In the absence of restrictions on its movement, under gold-standard conditions a moderate difference in interest rates² will provoke a substantial flow of short-term capital. The only serious exception is when a financial crisis in some country (as in Germany in 1931) greatly increases the risk of currency collapse. At such a time, even a large interest-rate differential may be insufficient to attract outside money. The great international mobility of short-term capital under normal conditions, then, would seem to warrant us in excluding movements thereof from a balance of payments that is in equilibrium. (The appearance of movements of this type of capital, on the other hand, may be regarded as evidence of a disturbance of equilibrium, the first steps in the restoration of which it is their function to perform.)

Closely related to the foregoing is the fourth type of equilibrium, that having to do with monetary and banking relationships. Monetary equilibrium may be said to exist in any country when the volume of effective money (the quantity of money, including under that heading all means of payment, multiplied by its circuit velocity) bears such a relation to the

¹ Many long-term securities, especially those with an international market, also possess a high degree of liquidity, in the sense of marketability. When short-term interest rates are high in some important national money market, owing to a temporary stringency, international movements of these securities may supplement the flow of short-term capital. The reason for this is that a tight money market tends to be accompanied by a decline in the prices of stocks and bonds, which makes their purchase in this country and their sale in others (arbitrage in securities) profitable. Such a movement of securities, though it may reverse a normal trend, is generally a temporary money-market phenomenon, in no wise to be regarded as indicating a change in the basic circumstances underlying the normal flow of long-term capital for investment.

² A difference of $\frac{1}{4}$ to $\frac{1}{2}\%$ appears to have been a sufficient differential, as between the leading financial markets in normal times, to induce short-term capital movements. A considerably greater differential would naturally be required to bring about a movement into or out of a country with a relatively undeveloped financial market, while with respect to backward countries, where no such market exists, short-term capital movements can hardly be spoken of at all.

level of business activity that there is no tendency toward a general expansion or contraction of output, employment, and incomes.¹ Thus monetary equilibrium is consistent with the existence of industrial disequilibria which are in the process of being corrected, though it is possible, as will appear later, that such a process of adjustment may tend to disturb monetary stability, requiring as an offset positive action by the monetary authorities. Nor is full employment of the community's productive resources essential to monetary equilibrium. A condition of continuous stable balance with much less than full employment is a distinct possibility.²

The existence of monetary equilibrium in each of a number of interrelated countries *ipso facto* rules out disturbances in the balance of payments attributable to monetary causes. Owing, however, to the fact that monetary equilibrium in one country may require a discount rate higher than elsewhere, the enforcement of a credit policy aiming at the establishment of equilibrium would tend to promote a movement of short-term capital and thereby, for reasons presently to be made clear, disturb monetary conditions in both the lending and the borrowing country. Again, although monetary equilibrium might be established, a disturbance such as a shift in demand could, by the reactions it provoked in the balance of payments, similarly disturb the monetary situation. Although prompt and effective action by the banking authorities to offset any changes in the volume or velocity of money might suffice to counteract such disturbances, these illustrations are ample to show the close interrelation between a country's monetary system and its international transactions. They are, indeed, merely one particular instance of the close interdependence of all aspects of economic activity.

¹ This is not the place to discuss the interesting problem of whether monetary equilibrium is attainable by means of a policy of stabilising per-capita money incomes or by means of a policy of stabilising some price level, or through some other policy. The interested reader is referred to A. D. Gayer, *Monetary Policy and Economic Stabilisation*, for a balanced discussion of this subject.

² On the subject of "underemployment equilibrium," see J. M. Keynes, *The General Theory of Employment, Interest, and Money* (The Macmillan Co., New York, 1936).

What we have chosen to call different types of equilibrium are thus in reality but particular aspects of general equilibrium, with no sharp dividing line between them. Nonetheless this separatism of treatment is useful in promoting clarity of thought in the discussion of problems which are often extremely complex.

DISTURBANCES OF EQUILIBRIUM IN THE BALANCE OF PAYMENTS

Having outlined the more important aspects of general economic equilibrium, disturbances of which constitute the sources of disequilibrium in the balance of payments, we may now proceed to examine the mechanism by which adjustment to various specific disrupting forces is carried out.

Any force which increases (or decreases) the size of any item on either side of a nation's balance of payments without providing simultaneously for an offsetting increase (decrease) on the opposite side, or for an offsetting decrease (increase) in some other item on the same side, will disturb the previous balance of debits and credits and call for adjusting changes.¹ Of the manifold possible disturbances to the smooth movement of goods, services, and long-term investment,² the following may be mentioned as among the more common :

- Failure of an important crop;
- Natural disasters such as earthquakes, floods, and famines;
- A speculative security or real estate boom in some country;
- Changes in international demands;
- Changes in the relative supply of the productive factors (exhaustion of natural resources, development of new sources of raw material supplies, immigration or emigration, national differences in rates of population growth, etc.);

¹ The only type of transaction of any importance which does provide its own offset is the so-called "tied" loan, where it is expressly stipulated that the entire sum of the loan is to be spent in the lending country. Even in this case, however, unless the loan is spent as rapidly as the funds are advanced, some form of adjustment is called for.

² To simplify the discussion, we continue to ignore services, tourists' expenditures, and miscellaneous items, except for occasional mention. The argument applied to the items considered may readily be extended to cover these omissions.

- Varying rates of progress in invention and technique (affecting the level of costs in different international industries, in the long run changing the most efficient combination of the factors and hence their relative importance);
- Increasing demand for capital for the development of a new region or of new resources;
- Accumulation of capital as a country grows older and richer;
- Stimulation by monetary causes of a boom or depression in any given country;
- War;
- The exaction of an international indemnity.

It requires little reflection to perceive that any one of these phenomena will tend to upset any preexisting equilibrium in the balance of payments of the countries affected. Our task is to enquire into the sequence of events by which adjustment to such a source of disequilibrium is worked out — in a word, to discover the mechanism of international adjustment to a disturbance in the balance of payments.

Two stages in this process of adjustment may be distinguished: an initial or short-run period, which in the case of a short-lived or superficial disturbance may comprise the entire process of adjustment, and a long-run phase following the initial stage, by which more enduring or deeper sources of maladjustment are corrected.

SHORT-RUN PROCESSES OF ADJUSTMENT

We may logically begin our analysis of the mechanism of adjustment with a study of the short-run processes involved. In this connection, movements of short-term loans and international balances, which we have already encountered in discussing the sources of elasticity in the demand and supply of exchange, are of special importance. (For under gold-standard conditions these balance-of-payments items act to a very great extent as a balancing element in the international accounts, serving to fill in any gap therein caused by some form of disturbance.)

Where the disturbance is of a short-lived nature, the short-term capital movements may provide all that is needed to

effect a gradual restoration of equilibrium. Where, however, a more basic and lasting disruption of equilibrium is involved, they serve as a means by which the necessary processes of adjustment may be set in motion.

In order to discover the role of short-term capital movements in the mechanism of international adjustment, let us consider first the manner in which they are brought about, then the results for which they are responsible.

Suppose we imagine some change to take place in the forces determining the volume of one important class of international payments such as to cause an increase in the demand for foreign exchange. This change might be any appropriate form of the various types of disturbance to international equilibrium listed above — for example, the failure of an important export crop, a marked increase in the demand for imported raw materials contingent upon increased business activity, or a sudden rise in the rate of foreign investment in response to improved investment opportunities abroad. Each of these developments would, by increasing the demand for or decreasing the supply of foreign currency, lead to a rise in the exchange rate.

If no additional sources of supply of foreign exchange were available, the rate (or more properly, rates) of exchange would rise to the gold export point and gold would flow in settlement of the excess in the international debits or payments owed. Usually, however, from one or more of several possible sources, new supplies of foreign exchange will be forthcoming. Their addition to the normal supplies of foreign credits provided by exports and other current transactions will render the supply of foreign exchange more elastic and will tend to check the rise in the exchange rate at a level below the gold export point.

Consider first the position, relative to the exchange market, of the Central Bank. These institutions always hold some portion of their resources in the form of foreign assets (bills or deposits). Foreign-exchange dealers and banks, by purchasing foreign balances from their Central Bank, are thus enabled, to meet the increased demand of the market. In the course

of making these purchases, however, banks will reduce their reserves at the central institution. Unless they had surplus reserves to begin with, or unless the Central Bank itself offsets their reserve losses by open-market security purchases, reserves will fall below the required minimum.¹ The consequent necessity of rediscounting or of contracting deposits will tend to bring a rise in discount rates. As soon as a sufficient differential relative to foreign money markets is established, short-term capital will move into the country whose balance of payments is under pressure. Banks in this country (say the United States) will draw, for example, long sterling financial bills, thereby establishing credits in London against which sterling drafts may be sold. The dollar proceeds of the sale of the borrowed sterling credits will then be lent out in the New York money market at the higher rates of discount now ruling there. By borrowing from the London money market, additional supplies of foreign exchange are made available, serving to fill in the gap in the balance of payments and checking the tendency toward a loss of the country's foreign exchange (or gold) reserves.

Concomitantly with the movement of short-term foreign funds in search of higher earnings (or even in advance of such a movement, if the rise in discount rates is slow or inadequate in magnitude) there will also appear an inward flow of speculative funds. For as the rate of exchange approaches the gold export point, the less probable becomes any further rise, while the greater becomes the probability that the future rate of exchange will be lower. Speculation in exchange will tend to develop. In terms of the above illustration, foreign-exchange dealers in New York will borrow from London in the usual fashion, selling their borrowed sterling balances at the current high rate and planning to purchase cover for their loans at a

¹ On the other hand, if the reserve position of the Central Bank itself were weak, the decline in its foreign-exchange holdings might lead it to impose a more restrictive credit policy, raising its rediscount rate and perhaps even selling securities in the open market. Thus central banking policy may offset or it may reinforce forces tending to bring about higher interest rates. In what follows, we shall assume its attitude to be neutral.

later date when the dollar price of sterling is expected to be lower. Here again short-term international borrowing (*i.e.*, an inflow of foreign short-term capital) provides additional supplies of exchange and checks the outflow of gold or loss of foreign-exchange holdings that would otherwise develop.

Under certain rather unusual circumstances, when a country's banks have surplus foreign balances, additional supplies of exchange may be provided for a time without borrowing abroad. A rise in the exchange rate will induce bankers to place these funds on the market. These balances (*e.g.*, sterling), after being sold to importers and others with payments to make in England, will be transferred to British ownership.¹

Mention should also be made of one further source of an additional supply of exchange which makes its appearance as discount rates rise in the market where the demand for foreign exchange has increased. With a higher level of interest rates, the cost to speculators of holding securities with borrowed funds is increased. Excluding the possibility of a stock-market boom, with sharply rising security prices, the demand for securities will fall off, and their prices will decline. Those securities which possess an international market will now appear to be good bargains. Foreign sales will tend to increase, adding from another source to the supply of foreign exchange available.

Thus from one or more of several separate channels — financial and speculative borrowings abroad, the sale of foreign balances, and the sale of international securities — a stream of additional supplies of foreign funds makes its appearance in the foreign-exchange market of a country whose balance of payments has suffered an adverse change. These various additions to the supply of exchange check the rise in the exchange rate and fill in the initial gap in the balance of payments created by the increase in demand. If the original disturbance in the balance of payments is mild, a rise in the

¹ Since the foreign indebtedness of the country acquiring such balances — in this instance, England — is reduced, their transfer is equivalent in effect to a loan; *i.e.*, it may be classed as one form of short-term international capital movement.

rate of exchange and a movement of short-term speculative capital may suffice to provide the needed foreign resources; there may be not only no gold flow but even no loss of foreign-exchange reserves by the Central Bank. If, on the other hand, the disturbing forces are powerful, or if they operate for a considerable period of time, the volume of available short-term adjusting items (which are not unlimited) may be inadequate to prevent a rise of the exchange rate to the gold export point and an outward movement of gold.¹

From the foregoing discussion it appears that movements of short-term capital into a country with an adverse balance of payments provide a substitute for a loss of foreign-exchange reserves or for an outward movement of gold. They simultaneously act as a stop-gap in the balance of payments. This, however, is only the first step in the process of adjustment. If no further consequences followed from the international flow of short-term funds, they could only be regarded as serving to postpone temporarily the need for a transfer of gold or its equivalent. It is to the next stages in the mechanism of adjustment and to certain monetary effects of these short-term capital movements that we must now turn our attention.

Clarification of the further role of international short-term borrowing and lending in the task of adjusting a nation's balance of payments to some source of disturbance can perhaps best be gained by asking the question: What must be accomplished to restore equilibrium? An enduring restoration of equilibrium, as the following chapter shows, will vary with the nature of the disturbing cause, and will require certain basic changes in the economies affected by the disturbing forces. Since we are not at this point concerned with changes of a

¹ "The role of short-term capital movements as an equilibrating factor is limited, however, by the imperfect international mobility of such funds. While, in the absence of 'fear movements,' the international movement of short-term funds tends to bring about equality of short-term interest rates in different money markets; the amount of short-term funds which will move across national frontiers in response to moderate differentials in interest rates is for many frontiers always, and for all frontiers frequently, insufficient in quantity to bring about 'actual equality of interest rates or to reduce to-and-fro movements of gold to a minimum.' (Viner, *op. cit.*, pp. 405-406.)

long-run nature, but only with short-run processes which prepare the way for more fundamental readjustments, the question becomes one of immediate requirements. One of these is that equality in the balance of payments be preserved, and this requirement is adequately fulfilled by the provision of additional supplies of foreign exchange. Clear also is a second immediate need — that by some means an international transfer of purchasing power be brought about. This is true regardless of the specific nature of the forces which have upset the equilibrium of the balance of payments. For whether the disturbance is traceable to an increase in the country's demand for imported products, to a larger volume of international long-term lending, or to a deficiency of exports, the demand for foreign currency has undergone a relative increase. Payments to be made abroad have grown in relation to payments due from abroad. In some manner or other, this net increase in foreign payments due must be taken care of — a net transfer of purchasing power to foreigners must be made possible. How this is brought about by international movements of short-term capital is the problem to which we may now turn our attention.

If an adverse balance of payments leads to an outward movement of gold, the means by which an international transmittal of payments occurs is perfectly obvious, since the gold is itself money. Again, it is clear enough that when the foreign-exchange reserves of a country's Central Bank or bankers' surplus balances abroad are drawn upon, there is simply a transfer in the ownership of foreign deposits. The situation is very similar when the supply of foreign exchange is provided by short-term international borrowing. The only difference is that instead of drawing upon foreign means of payment already owned by institutions in the paying country, funds are borrowed from the money market of the country to which payments are being made.

Perhaps this matter may be made clearer if we consider exactly what happens when, for example, New York borrows on short-term from London. As we noted above, New York

banks will draw long sterling bills (either speculative, or financial in nature, or both) on London banks. As these bills arrive in London, they will be accepted by the agents of the New York banks, then discounted in the money market, the proceeds being put to the credit of the New York drawers. These proceeds will then be transferred to English exporters or other creditors of Americans as the drafts sold against them arrive. The funds thus made available are provided by brokers in the London discount market, who borrow at call from the banks, making their profit in the slightly higher rate charged for discounting long bills. (Banks with idle funds may themselves do some of the discounting.)¹ Thus the foreign money market provides the funds needed to make the net excess of foreign payments to which the disturbing forces have given rise. The result is the same, so far as making these payments is concerned, as if gold had moved between the two countries. In effect, there has taken place an international transfer of purchasing power. Although there is no actual transfer of money from one country to another, the result is the same as if there were; therefore the phenomenon which has been described is usually referred to as a transfer of purchasing power.

In bringing this result about, we perceive the second function of international short-term capital movements, the first having been to substitute for gold or foreign-exchange reserves as a means of making up a deficit in a country's balance of payments. It is by effecting an international transmission of payments that short-term capital movements are of primary importance, for by so doing, they set in operation certain of the longer-run processes of adjustment necessary to restore equilibrium in the face of some deep-seated and enduring dis-

¹ It is to be noted that if this discounting activity is to take place without forcing up interest rates in London, bank credit in that center must be elastic (*i.e.*, the banks must have surplus reserves). Should the banks have no excess reserves, funds for discounting sterling finance bills will have to be diverted from other uses, at the cost of higher interest rates. This rise in interest charges (relative to New York) will discourage the drawing of financial bills, and if American balances in London are exhausted, gold will have to move in payment of excess American obligations.

turbance. This topic, however, is reserved for discussion in the next chapter.

If the original disturbance is of a short-lived nature, such as a brief and sudden increase in the demand for imports or a temporary crop shortage, reestablishment of the original state of equilibrium will be gradually achieved without the necessity of setting in motion a complex series of long-run mechanisms. First, assuming a sudden brief increase in the demand for imports to have occurred, the rate of exchange will rise, some of the Central Bank's foreign-exchange holdings may be purchased, discount rates will tend to move upward, and a financial and speculative movement of short-term capital into the country in question will take place. The balance of payments is kept in balance, and purchasing power is "transferred" abroad, providing the immediate wherewithal with which to purchase the additional imports that are wanted. So long as the rate of exchange continues higher than normal, imports in general will in some measure be restricted, exports stimulated. This effect will be further reinforced if the increase in the demand for imports (presumably certain special items) takes place at the expense of certain domestic products, *i.e.*, if there is a shift in demand. For in that case, some diminution in domestic incomes will occur, and a still further reduction of imports (other than those directly involved in the initial change) will follow. Any decline in imports and increase in exports will assist in closing the gap in the balance of payments first filled in by short-term capital movements. When the brief increase in foreign purchases comes to an end, the rate of exchange will decline again, and a gradual liquidation of the short-term loans can take place.

In the foregoing analysis of the role of international short-term capital movements in the mechanism of international adjustment, the standpoint adopted has been primarily that of the country whose balance of payments is under pressure. The discussion did, however, bring out the fact that if the mechanism is to operate at all, the country to which payments

are to be made must permit an ⁽²⁾ expansion of bank loans and deposits. This is necessary to provide the foreign money to be transferred to the creditors of the country whose requirements for international payments have increased, and is contingent upon the possession or the acquisition of surplus reserves by the banks of the lending country.

Perhaps greater light may be thrown upon this matter if we consider the situation as it exists, not in the country with an adverse balance of payments but in the country (or one of the countries) whose balance of payments is rendered more favorable.¹ Moreover, instead of assuming as above that the initiative in making payments is taken in the debtor country (say the United States) let us assume all steps in collecting or transmitting payments to originate in the country to whom an excess of payments is owed (England). In this event, an adverse change in the balance of payments of the United States, whatever the cause, will appear in England as an increase in the supply of dollar exchange. The total value of dollar exchange offered for sale to English banks will exceed the current demand, and the sterling price of dollars will fall toward the gold import point. This fall will be checked, however, and no gold need move into the country if the English banks have surplus reserves and if they are willing to allow an increase in their American balances or in their short-term loans to New York. A sufficient fall in the value of the dollar will establish a speculative motive for the accumulation of dollar balances, while a moderate rise in discount rates in New York will provide the necessary incentive to short-term lending by London. If these conditions are satisfied, the excess supply of dollar exchange will be discounted by the English banks. Note, however, what this means. Every dollar deposit acquired by the purchase of a bill of exchange is paid for by the creation of sterling deposits to the credit of the seller of the bill (e.g., an English exporter). So far as English-

¹ We could regard the disturbance which renders one country's balance of payments adverse as a disturbance which changes some other country's (or countries') balance of payments in a favorable direction.

men have payments to make in the United States, their demand for dollars will result in a sale of American funds and a destruction of sterling deposits. But any excess in the supply of exchange bought by the banks over and above their sales will result in a net increase in the volume of sterling deposits. Therefore if the excess supply of dollars is to be purchased, either the banks must already possess surplus reserves or they must be readily available.¹ Thus by a different route — starting with different assumptions as to where the initiative with respect to payments is taken — we reach the same conclusion, as indeed we must. (International short-term capital movements, which are capable of performing a useful role in the mechanism of international adjustment, can only take place if the country called upon to make short-term loans is in a position to permit an expansion of credit.)

MONETARY EFFECTS OF SHORT-TERM CAPITAL MOVEMENTS

The analysis of the preceding section, though directly concerned only with the function of short-term capital movements in adjusting the balance of payments, has touched at a number of points upon matters which are primarily monetary in nature. These are of sufficient interest and importance to warrant separate attention.

From what has just been said, it is clear that a country whose balance of payments has been disturbed in a favorable direction — that is, a country whose claims to payment have been caused to rise above current payments due abroad — is bound to undergo an expansion in its supply of money.² (This is perfectly obvious in case the disturbance leads to an inflow of

¹ If no surplus reserves are available, they may readily be secured by selling some of the additional supplies of foreign exchange to the Central Bank. Hence the absence of surplus reserves does not constitute a serious stumbling block. Only if the Central Bank is pursuing a restrictive credit policy will there be any real difficulty in effecting adjustment without a movement of gold.

² The supply of money is here taken to mean the sum total of means of payment, and includes cash in the hands of the public and deposits subject to check (demand deposits).

gold.¹ If domestic funds held by some foreign Central Bank or foreign commercial banks are transferred to residents of the country in question, though no actual increase in the total supply of money has occurred, its velocity and thus the *effective* supply of money may be increased.² This will be the result if the funds formerly owned by foreigners were held idle or were devoted to uses where their velocity of circulation was low, while the new (domestic) owners put them more actively to work.²

When there occurs not an inflow of gold or transfer of foreign-owned balances, but short-term lending by the country with a more favorable balance of payments, the necessity for an actual expansion in the supply of money is clear. Either the supply of dollar bills in London (to continue our earlier illustration) exceeds the current normal demand, or the demand for sterling in New York exceeds the current normal supply. If the former, then with a lower sterling price of dollars and a relative rise in discount rates in New York, London banks will themselves provide the demand necessary to absorb the excess supply of dollars. In buying up the surplus dollar exchange on the market, they will create new sterling deposits, and the supply of money in England will

¹ Unless the gold is brought in by a bank on its own account, in which case member bank reserves are increased, but not the deposits of the public. See C. P. Kindleberger, *International Short-Term Capital Movements*, p. 25.

² Foreign balances tend to be invested in the money market, where, even though their turnover may be high, they are not exchanged against goods and services. It is only as money is used to finance production, rather than the purchase and sale of stocks and bonds, that it enters into national income. Therefore a transfer of funds from foreign to domestic ownership will generally tend to increase the volume of money devoted to industrial uses and to increase the national income, since whether the transfer is for the purchase (by foreigners) of exports or of securities of the country whose balance of payments is more favorable, presumably the funds so acquired will be used for productive purposes. An exception would exist when, as in the United States in 1929, foreigners were using their holdings of domestic funds to participate in stock-market speculation. Even here, the money so used in the first instance might ultimately get into the hands of issuers of new securities. The whole problem is too complex to warrant extended discussion in a general book such as this. For a more elaborate treatment of the issues, see C. P. Kindleberger, *op. cit.*, and James W. Angell, "Equilibrium in International Payments: The United States, 1919-1935" (in *Explorations in Economics*).

increase by an amount equivalent to the banks' own expenditures on foreign exchange. If, on the other hand, payments and collections be initiated in New York, additional supplies of sterling to match the increased demand will (under the assumed conditions) be provided by sterling bankers' bills drawn by New York banks. As we have seen (p. 151), when these bills arrive in London, they are first accepted by the drawees, then discounted by brokers with funds newly borrowed from the banks (or by banks willing to invest new deposits in these short-term assets). The supply of money must be increased to permit discounting of these bills to take place. Thus both approaches — as indeed they must — lead to the same conclusion: that if a country with a more favorable balance of payments lends part or all of its additional foreign claims, its supply of money will to this extent increase.¹

Consider now the monetary situation in the country (the United States) whose balance of payments has suffered an adverse change. If the initial gap in the balance is filled by purchases of gold or foreign exchange from a Federal Reserve Bank, buyers of this additional supply of exchange will draw checks against their deposit accounts and demand deposits will be extinguished. In order to get the gold or foreign exchange from the Federal Reserve Bank, commercial banks will have to draw upon their reserve deposits. Therefore, unless member bank reserves were at the outset above the legal minimum requirements, a secondary contraction of credit will be necessary, over and above the initial extinction of demand deposits.

If commercial banks possessed sterling deposits (or liquid assets) above their normal current requirements, they might provide the additional foreign exchange needed by selling drafts against these deposits. The immediate result would be a cancellation of demand deposits to the value of these sales

¹ This would only be untrue if funds which had hitherto been lent to domestic borrowers were diverted to the purchase of foreign bills or balances. If no decline in the demand for short-term credit by domestic borrowers be assumed, there is no reason why any such diversion of funds should occur, provided surplus reserves are available or can be readily acquired.

of sterling assets. Deposits so extinguished might, however, immediately be replaced by new loans, since the lending power of the banks would in this case be in no wise reduced.

Suppose, however, that after moderate purchases of foreign-exchange reserves from the Federal Reserve Bank, the rise in the dollar-sterling exchange rate and an increase in New York discount rates stimulate short-term borrowing from London. Dollar deposits are extinguished in the purchase of sterling thus made available, but the banks are going to re-lend the proceeds of their sterling sales. They must do so, or face a certain loss, since they will have to pay interest on the borrowed sterling. In this event, there will be no decline in the total supply of dollars. The velocity of circulation, and thus the effective supply of money in the United States may, however, be reduced. For if the increased demand for sterling proceeds from an expansion of imports or larger purchases of foreign securities (long-term foreign investment), dollars which would have been used to buy American products or to invest in American industry will be extinguished, while the dollars which replace them will probably be lent out in the money market, where the velocity of circulation is likely to be smaller.¹

In conclusion, it may be said that where international short-term capital movements develop in response to a disturbance in the balance of payments, the country (with an adverse balance) which borrows abroad on short-term will tend to suffer a reduction in the velocity of circulation of its money, or even — if foreign-exchange reserves are drawn upon and discount rates rise — a shrinkage in its supply of money. On the other hand, the country (with a favorable balance of

¹ In any event, funds lent to the money market are less likely to come promptly and directly into contact with goods and services. Therefore funds available to industry, and thus incomes earned in production, are likely to decline.

It is possible, of course, that the dollars used to buy sterling, especially if the purpose is to make long-term investments abroad, may have been lying idle in hoards. In this case, there would be a net increase in velocity. Again, for a fuller discussion of the issues involved here, see J. W. Angell, and C. P. Kindleberger, *op. cit.* Dr. Kindleberger's book furnishes the most thorough treatment of its subject matter that is available.

payments) which lends abroad on short term will witness an increase in its total supply of money.

SHORT-TERM CAPITAL MOVEMENTS AS A SOURCE OF INSTABILITY

So far as short-term capital movements permit the smooth adjustment of brief disturbances such as sudden spurts in the demand for imports, crop shortages, and the like, or so far as they prepare the way for the operation of longer-run processes of adjustment, they are a stabilising factor in the balance of payments. The necessity of large and recurrent shipments of gold is done away with, and a more economical method of handling the disturbances functions instead. This is particularly conspicuous with respect to seasonal variations in the balance of payments.

For short-term capital movements thus to facilitate the processes of international payment, however, it is essential that the general political and economic atmosphere be one of reasonable stability and confidence. For then the international transmission of funds is held within comparatively narrow bounds; it is limited to the existing volume of bankers' and dealers' foreign balances and to that proportion of short-term capital which will move between countries in response to moderate possibilities of gain. This requisite environment was provided for several decades prior to the World War. Since that catastrophe, and even more since the outbreak of the world-wide depression in 1929, uncertainty as to the future has been greatly increased — in particular, currency instability has become a potent source of fears for the future. The usual stimuli to capital movements — the prospect of a moderate speculative profit or of a larger interest return — frequently give way to much more powerful forces: the fear of departure from the gold standard or of currency devaluation, the danger of the immobilisation or "freezing" of short-term investments, or the possibility of total loss in case of war. Under such conditions, not only do the normally mobile short-term funds shift rapidly from center to center in search of a safe resting-

place, but to their movements may be added those of all foreign and domestic assets which are or may be made liquid. Then, as Viner has vividly expressed the matter,

. . . there have been notorious cases, and especially in recent years, where the erratic and unpredictable movement of short-term funds has influenced the international mechanism during a period of stress very much in the manner in which loose cargo operates on a ship during a storm. The high degree of international mobility of short-term funds becomes a liability instead of an asset when there is alarm in the air, for short-term funds are quick to fly to foreign countries in search of safety when there is alarm at home, and are even quicker to be called back home when there are signs of trouble abroad.¹

Some of the outstanding recent experiences with this upsetting behavior of mobile funds warrants citation. Thus Germany, which in the late twenties encountered increasing difficulty in meeting her capital requirements by long-term international borrowing, turned instead to short-term loans. By the end of 1930, it is estimated that total foreign short-term investments in Germany amounted to approximately four billion dollars,² even after the withdrawal in the last quarter of that year of some \$250 millions. This period of liquidation of short-term credits (to which was added the withdrawal of the proceeds of security sales) was brought to an end by the advance by an international banking group of \$125 millions. It was not long, however, before a renewed run on Germany broke out. In May, 1931, the Creditanstalt, a large Austrian bank, disclosed heavy losses. This news started heavy withdrawals from Austria; the loss of confidence also affected foreign holdings in Germany. In a period of four weeks, that nation lost another \$250 millions of gold and foreign assets. In spite of the advance of a credit of \$100 millions by the Bank for International Settlements and the inauguration early in July of the Hoover moratorium on reparation and war-debt payments, the run was intensified, largely as a consequence of

* ¹ Viner, *Studies in the Theory of International Trade*, p. 407.

² See below, p. 213.

the failure of one of the largest German banks (Darmstädter und National Bank). For a period of several days every bank in Germany closed its doors and the stock exchanges were shut up. At this time the first steps toward exchange control were taken with the centralisation of all foreign payments in the Reichsbank. After an inquiry conducted by the Bank for International Settlements, a "standstill" agreement was established, by which Germany's principal short-term creditors extended their credits for six months. Subsequently, owing to the impossibility of liquidating these credits, this "standstill" agreement was repeatedly extended. Since the institution of rigorous exchange control and exchange-clearing arrangements, a considerable proportion of these "short-term" German debts have been gradually liquidated.

But the credit crisis of 1931 was not limited to Germany and Austria; it became truly international in scope, even France and the United States, with their immense gold reserves, being subjected to a considerable drain. It was Great Britain, however, that, next to Germany, became most seriously involved in the credit panic. For Great Britain had been one of the heaviest lenders to Germany and other central European countries, and now that her credits became frozen, foreigners with deposits or other liquid assets in London became concerned as to Britain's ability to discharge them. Heavy withdrawals began, and in the last half of July the Bank of England lost £30 millions of gold. Publication of an estimated budget deficit of £120 millions added to the fears of foreign creditors. In spite of the advance of total credits of £130 millions by the Bank of France and the Federal Reserve Bank of New York, the drain continued, amounting, in the period from the middle of July to September 20, to over £200 millions. On September 21, Great Britain ended the gold drain by abandoning the gold standard.

Another chapter in the story of short-term capital movements of the "loose-cargo" variety covers the period from 1934 to 1937. Prior to and during these years, currency depreciation by the United States, Great Britain, and numer-

ous other countries intensified the difficulties of the gold-bloc nations (France, Belgium, Switzerland, and the Netherlands), in particular making it difficult for them — with their currencies still at the 1929 parity — to meet foreign competition. Faced with a constantly adverse balance of payments, these countries, unduly fearful of inflationary recovery measures, engaged in a rigorous policy of deflation, attempting thereby to bring down prices and costs in line with those of countries whose (gold) prices had fallen in consequence of currency depreciation. The result was to aggravate already serious depression conditions, and increasingly to unbalance government budgets. (Between 1932 and 1936, the French public debt increased by 75,000 million francs.)

Belgium was the first to crack under the strain. In April, 1935, she devalued her currency 28%. Distrust in the currencies of the remaining gold-bloc nations led to a chronic and later to a rapid flight of capital. In the second quarter of 1936 the Bank of France lost over 11.5 billion francs of gold and foreign assets. The reversal of the earlier deflationary policy in France by the new Blum government, which took office in early June, led to a temporary abatement of the run. It was resumed, however, in September, and in that month the inevitable step of currency devaluation was taken by all three of the gold-bloc countries. France and Switzerland devalued by approximately 30%, the Netherlands by close to 20%.¹ After this initial devaluation, the French franc was allowed, in the summer of 1937, to depreciate approximately an additional 13% of the original parity, as a consequence partly of rising internal prices and partly of a renewed outflow of capital. Owing to continued economic pressure, the Daladier government in May, 1938, undertook a third devaluation, which brought the franc down to a value of 2.79¢, or 42% of its 1936 dollar value (6.63¢).

¹ Italy also cut the official parity of the lira by approximately 41%, to bring it in line with the exchange value of the dollar, while Czechoslovakia reduced the value of the crown by 16%, to keep in adjustment with the franc. For other aspects of these devaluations, see Part II, Chapter XI.

We may conclude this discussion by indicating the changes that took place in international short term indebtedness in the four years following 1930. The following table shows the total indebtedness on short term of European countries and the United States, and probably is not far from the world total. Of the 70 billion francs outstanding in 1930, Germany

INTERNATIONAL SHORT-TERM INDEBTEDNESS, 1930-34¹

(In Billions of Swiss Francs)

	At End of Year				
	1930	1931	1932	1933	1934
Trade financing	22	15	11	9½	9
Central bank holdings . . .	14	7	4	3½	3½
Foreign debt service	4	3	2	1½	1½
All other	30	20	22	17½	15
Total	70	45	39	32	29

owed 20 billion, the United States 14 billion, and England 10 billion. Since these figures are for total rather than for net indebtedness, they overstate the position of any single country. (Some of Germany's 20 billion of indebtedness, for example, was offset by the indebtedness of other countries to Germany. An earlier estimate, apparently less comprehensive, placed Germany's total short-term foreign debt at 10,300 million marks, her foreign short-term assets at 5,300 millions, leaving her with a net liability of 5,000 million marks.)² The totals of the table are likewise considerably in excess of the net figures; yet the significant facts are their huge size in 1930 and their reduction by nearly 60% in four years. Although later figures are not available, it is probable that with the expansion of world trade since 1934, the sum of short-term funds devoted to trade financing has increased, while those for central-bank holdings and foreign-debt service appear to have reached a minimum. In any event, the volume of short-term international indebtedness is still very large, capable of acting

¹ Joint Committee, Carnegie Endowment: International Chamber of Commerce, *The Improvement of Commercial Relations between Nations, the Problem of Monetary Stabilisation*, p. 362, Paris, 1936.

² Report of the London Conference Committee, 1931, cited in *World Economic Survey*, 1931-32, p. 77. (League of Nations Publications, II. Economic and Financial. 1932. II. A. '18.)

with a different relationship of the various interacting forces — will require a longer period of adjustment and more fundamental changes than in the case of short-run phenomena. The initial stages of the mechanism of adjustment, however, though they will be succeeded by further change, will follow the lines laid down in the foregoing analysis of short-run processes. Therefore, in examining the chain of events by which the international economy responds to an important type of dislocation, we may begin where the short-period analysis leaves off: namely, with the movement of short-term loans and foreign balances and the concurrent "transfer" of purchasing power, and with the effects of the fluctuations in exchange rates upon imports and exports.

As will appear, whatever the specific form of disturbance, it will tend primarily to affect equilibrium in the industrial, the investment, or the monetary sphere, although its effects will generally broaden out until all phases of general equilibrium are in some degree influenced. In particular, almost any type of disturbance will tend to provoke monetary disequilibrium, simply because the initial short-period processes of adjustment tend to bring about changes in the money supply of the countries involved. The severity of the monetary disequilibrium thus established will in general depend upon the strength of the initial disturbing force and upon the policy followed by the central banking authorities. But more of this in the analysis which follows.

INVESTMENT DISEQUILIBRIUM AS A SOURCE OF DISTURBANCE IN THE BALANCE OF PAYMENTS

A frequent cause of disequilibrium in a nation's balance of payments is a change in the forces determining the international flow of capital. As we have indicated, both the persistence of differences in interest rates as well as a continuous and reasonably steady volume of capital movements are perfectly consistent with equilibrium in the balance of payments. (But when there occurs a change in the investment prospects in

some country such as to raise the rate of interest (or the earnings on capital invested in equities), or when a rapid accumulation of savings forces down the rate of interest in a lending country, a sharp increase in the international flow of capital may take place. This naturally disturbs the balance of payments of the countries involved, and sets in motion a process of adjustment which may work itself out only over a rather extended period.

Variations in international lending and borrowing are, at least from the point of view of the volume of economic literature devoted to their discussion, the most important type of disturbance of equilibrium in the balance of payments. Closely related to foreign loans, so far as concerns the mechanism of adjustment called into play, is the payment of tribute or reparations. Both loans and reparations involve a transfer of purchasing power from one nation to another. The only difference is that loans are voluntary and bilateral transfers, securities being acquired in return for the funds lent, while reparations are involuntary and unilateral, nothing being returned for the money paid out. To the mechanism of adjustment brought into operation by these transfers of purchasing power we now turn our attention.

Let us begin with a brief résumé of the classical analysis of the effects of international lending. This runs in terms of the well-known price specie-flow mechanism. Suppose that a certain country, starting with its foreign payments in balance, begins to lend annually a certain sum to another nation. To the extent that the proceeds of the loans are not directly spent in the lending country (L), a movement of gold toward the borrowing country (B) will be established. Incomes and prices will fall in L, rise in B, thereby stimulating an increase in L's exports, a decrease in her imports, until the entire amount of the loan is transferred in the form of goods. L will then have a "favorable" balance of trade to the amount of the sum annually lent, while, since the prices of her exports are now lower and those of her imports higher, her terms of trade, with B will be less advantageous than formerly.

In actual fact, as historical studies of fairly prolonged periods of loan transfer on the part of various countries have shown, the amount of gold movements under these conditions is astonishingly small. Moreover, the changes in relative price levels for which the classical analysis calls are not always observed to take place. Balance in the international payments of a lending country seems to be quickly restored, with only a modest flow of gold and change in prices. Commenting on this unexpected smoothness in the process of adjustment, Professor Taussig says:

The point that is less familiar, in connection with the theory of the subject, or at all events is not commonly considered, is the closeness and rapidity with which the varying balance of payments has found its expression in the varying balance of trade. The actual merchandise movements seem to have been adjusted to the shifting balance of payments with surprising exactness and speed. The process which our theory contemplates — the initial flow of specie when there is a burst of loans; the fall of prices in the lending country, rise in the borrowing country; the eventual increased movement of merchandise out of the one and into the other — all this can hardly be expected to take place smoothly and quickly. Yet no signs of disturbance are to be observed such as the theoretic analysis previses; and some recurring phenomena are of the kind not contemplated by theory at all. Most noticeable of all is the circumstance that periods of active lending have been characterized by rising prices rather than by falling prices, and that the export of goods apparently has taken place, not in connection with a cheapening of goods in the lending country, but in spite of the fact that the goods have seemed to be dearer at times of great capital export.¹

. . . the recorded transactions between countries show surprisingly little transfer of the only "money" that moves from one to the other, gold. It is the goods that move, and they seem to move at once; almost as if there were an automatic connection between these financial operations and the commodity exports or imports. That the flow of goods should ensue in time, perhaps even at an early date, is of course to be expected; it is a commonplace in the theoretical reasoning that this must be the ultimate outcome. What is puzzling is the rapidity, almost simultaneity, of the commodity movements. The presumable intermediate stage of gold

¹ *International Trade*, p. 239.

flow and price changes is hard to discern, and certainly is extremely short.¹

The suggestion, implicit in these passages, that perhaps the price specie-flow mechanism does not provide a full explanation of the processes involved in international transfers of purchasing power and that further inquiry is needed, has borne excellent fruit in recent years. Examination of the problem by a number of economists has resulted in great refinement of the theory of capital movements.² This modern analysis, to which we may now turn our attention, takes as its point of departure, as might be expected, the situation created by a movement of short-term capital.

Let us consider a concrete illustration. Assume a certain country (L) to commence a period of continued lending to another country (B), the loans to be transmitted at the rate of \$10,000,000 a month.³ We may assume the proceeds to be used in B for the purpose of capital construction. The problem is essentially that of effecting a lasting transfer of purchasing power of this sum each month. As we have seen, the short-run mechanism of adjustment provides a method of transmitting payment for at least a brief period of time. When, however, it is a matter of transferring large payments continuously over a period of several years, clearly the resources of the short-term capital market will not suffice, nor can gold movements be suffered to continue indefinitely. We may take it as axiomatic that in the long run international payments must be made in the form of goods and services. Therefore, the problem reduces to the following: what mechanism, other than that of price specie-flows, explains

¹ *Ibid.*, p. 260.

² Notably Bertil Ohlin, Roland Wilson, James W. Angell, H. D. White, C. P. Kindleberger, Carl Iversen, and Ragnar Nurkse. These writers naturally differ from one another in the emphasis they place upon different aspects of the mechanism of adjustment; yet they can be said to share a common approach.

³ While such an even rate of lending is not to be expected in actual fact, its assumption simplifies the illustration without abstracting from the essentials of the situation. It is to be noted that we also assume the same currency unit, the dollar, used in both countries. This avoids the introduction into our illustration of the additional and, for the purposes of the present discussion, unnecessary complexities arising from the use of different currency units.

how continuing international transfers of capital may be made by means of movements of goods and services? Or, more concretely, by what mechanism can L's receipts on international income account be increased relatively to her payments by \$10,000,000 a month?

Since the loan of funds or the export of capital by L may also be regarded as the sale of securities by B, we may look at the transactions from the latter point of view. Corporations and perhaps also local governmental units in B, by whom the construction of railroads, new industrial plants, and local improvements are being undertaken, will issue new securities, some of which are to be sold at home, some (\$10,000,000 a month) to purchasers in L. So far as the foreign sales are concerned, the borrowing organisations will draw bills of exchange on their purchasers abroad and sell these bills, with the securities attached, to the banks in their own country (B).¹ Thereby purchasing power is expanded in B to the amount of \$10,000,000 of newly-created bank deposits, the value (ignoring for the moment any change in the exchange rate) of current foreign sales of new securities.

Various corporations and governmental bodies in B now have additional funds available for expenditure. Since this money will in all probability be spent differently by them than had it been kept at home and not lent by L's citizens, there exists the possibility of at least a partial immediate solution of the transfer problem. With their additional purchasing power, borrowers in B will presumably to some extent buy more imports, to some extent increase their purchase of B's export goods, while they will spend the remainder on home-market or domestic commodities. So far as imports are increased and exports decreased, an addi-

¹ For B's banks to buy these bills of exchange, they must have sufficient surplus reserves to permit them to expand deposits by \$10,000,000. If the legal or customary reserve ratio is 10%, \$1,000,000 of surplus reserves will be required. Otherwise — unless B has a central bank which is both able and willing to discount \$1,000,000 worth of these bills (or any other eligible assets) — the rate of exchange must drop to the gold import point, permitting an inflow of gold from L until surplus reserves are ample to permit further purchases of the bills by the banks, together with the correlative expansion of deposits.

tional demand for exchange is evoked which absorbs part of the supply arising from the loan.

To the extent that the borrowers in B buy goods from L, they pay for them with L's currency; similarly, to the extent that they buy goods produced in B, the export of these goods falls off, the exporters have correspondingly less L currency to offer and the importers have to obtain L currency from the borrowers, paying them in B currency, which is just what the borrowers need in order to buy B goods.¹

The effect of B's changed demands upon her balance of payments may be clarified by means of an illustration. Assume that prior to the inauguration of the lending operations, B's international payments are in balance in the following simplified form:

	<i>Import Items</i>		<i>Export Items</i>	
Imports	\$50,000,000	Exports

Immediately after the purchase by B's banks of the newly-drawn bills of exchange, but before any of the resultant funds have been spent, the situation will be:

	<i>Import Items</i>		<i>Export Items</i>	
Imports	\$50,000,000	Exports
Bank balances in L	10,000,000	Securities
	<u>\$60,000,000</u>			<u>\$60,000,000</u>

The securities exported go into the "export items" column, since these are being purchased by individuals in L. Bank balances in L, which B's banks have acquired (or more properly, will acquire as soon as the bills of exchange are paid in L) enter the "import items" column for the reason that these increased balances represent the import of short-term promises of L's banks to pay B's banks, just as the securities sent abroad are the long-term promises of B's citizens to pay L's citizens.

If now the borrowers in B purchase \$3,000,000 worth of additional imports and at the same time buy an extra \$3,000,000

¹ Ohlin, *op. cit.*, p. 408. The letters used have been changed to correspond with the usage in these pages.

of the products of B's export industries, spending the remaining \$4,000,000 on domestic commodities and services, the balance of payments takes the following form:

<i>Import Items</i>	<i>Export Items</i>
Imports	\$53,000,000
Bank balances in L .	<u>4,000,000</u>
	<u>\$57,000,000</u>
	Exports
	Securities
	<u>10,000,000</u>
	<u>\$57,000,000</u>

The increase in imports furnishes a sufficiently enlarged demand and the decrease in exports a sufficiently reduced supply of foreign exchange to absorb \$6,000,000 of the original \$10,000,000 addition to the supply of exchange. To this extent, then, the alteration of B's demands resulting from the initial transfer of purchasing power has brought about adjustment in the balance of payments, while a purely temporary measure of adjustment is provided by the willingness of B's banks to hold additional balances in L.

But the process of adjustment does not stop with these first reactions. Should the banks in B not care to hold larger foreign balances, they may sell their surplus of bills to the Central Bank. The effect of this would be to give additional reserves to B banks, and would tend to generate an expansion of loans and deposits and therewith increased business expenditures. Undoubtedly some of these newly-created funds would be used in the purchase of additional imports and for an increased home consumption of export goods, thereby still further exhausting the excess supply of exchange. So far as this development took place, the central bank would be relieved of its holdings of foreign balances. Only on the assumption that B was in the grip of a depression would the expansion of loans and deposits be unlikely to occur, owing to the absence of profitable opportunities for investment. Under such conditions, however, the volume of international lending is apt to be very small, if not altogether lacking.

Thus in addition to the "primary" expansion of purchasing power in B resulting directly from the loan transaction itself, there may occur a "secondary" expansion as a consequence of an increase in the reserves of commercial banks. This

tendency toward an expansion of loans and deposits may be reenforced by the attitude of the central bank. As it discounts the surplus bills of exchange for the commercial banks, its own foreign currency reserves will grow. Since under the gold standard these will be regarded as the equivalent of gold, the central bank will tend to adopt a more liberal credit policy, perhaps lowering its discount rate or even engaging in the open-market purchase of securities, thereby stimulating, or at least reducing the resistance to, a further expansion of credit.

The rate of exchange on L, which we have hitherto ignored, will, of course, tend to drop. It need not, however, fall to the gold import point if the banks in B are willing to accept an increase in their foreign balances in lieu of gold, *i.e.*, if their demand for balances in B is elastic within the range of the gold points. Because of the possibility of a speculative profit from a probable future rise in the value of L's currency, there is good reason for B's banks to increase their balances in L. This reason is reenforced if, as is likely, discount rates in L rise.

Up to this point, we have considered the processes of adjustment in the borrowing country alone. Opposite developments will, however, tend to take place at the same time in the lending country. As the bills of exchange drawn on the basis of the securities exported from B arrive in L, their collection will involve a transfer of the ownership of bank deposits from citizens of L to banks in B. Much depends, of course, on what L's investors would have done with their funds had they not decided to buy securities of B. They might have used them to buy consumers' goods, to invest in domestic securities, or they might have hoarded them. If the first, there would be a drop in the demand for goods consequent upon the transfer of bank deposits to the ownership of banks in B. Had the alternative been investment in domestic securities, the long-term rate of interest in L would tend to be raised and the volume of home expenditure on capital goods checked. In case the alternative had been

hoarding, no changes in L's demands could be assumed: the purchasing power of B's borrowers would be increased by the sum placed at their disposal.

If we may assume it as probable that the funds lent to B would have been distributed in some proportion among all three of these alternative uses, it is clear that there would be a net reduction in expenditures in L on commodities of various kinds. The demand for home-market goods as well as for imports and for exports would decline. To the extent to which the reduced domestic demand for her exports matched the increase in B's demand for them, the only change would be in the destination of these products. The smaller demand for imports, so far at least as it affected imports from B, would appear in the latter country as a smaller supply of exchange, serving to offset part of the increased supply resulting from the sale of securities. Part of the bank balances held in L by B's banks could be used to satisfy the increased requirements of B's importers. So far as this is the case, deposits originally transferred by investors in L to banks in B would be re-transferred by the latter to exporters in L.

If the transfer of ownership of deposits from L's citizens to banks in B results in their being put to uses where the velocity of circulation is lower, or where they come less directly into contact with goods and services, the result in L will be deflationary. Incomes will tend to fall. As we saw in the last chapter, this is a distinct possibility, inasmuch as foreign-owned deposits tend to be lent out in the money market of the country where they are held.

In addition to the deflationary influence of reduced demands by L's citizens for her own products, uncompensated by loans to industry out of the deposits now held by B's banks, there may occur an actual contraction of the volume of credit. This will tend to be brought about if the foreign liabilities of L's Central Bank increase or if its foreign assets (foreign-exchange reserves) decrease, although the central banking authorities may for domestic reasons prefer not to permit (or bring about) a rise of discount rates. Should a rise in

discount rates be allowed or encouraged, of course incomes and expenditures in L will tend to decline still further.

Thus far we have given no attention to the possibility of price changes in either of the two countries, having considered only the initial transfer of purchasing power and the shift in relative demands thereby permitted. That changes in relative prices may take place, however, is obvious. As the borrowers in B acquired their new funds, the demand for home-market goods, for imports, and for exports all were presumed to increase. So far as the increased demand for imports and exports is matched by a reduction in the demand for these things in L, the greatest stimulus to a rise of prices will be felt in B's home-market industries. Output of their products will be enlarged, and the increased demand passed along to the factors of production. Those factors used in relatively greatest abundance in the domestic industries will, of course, be most affected. Their prices will tend to rise most, since factors which are more characteristic of the export industries will tend to shift away from the latter, where the increased demand in B may be offset by some reduction of demand in L.

Given the volume of international lending whose effects we are analysing, the extent of the relative rise in the prices of home-market commodities and factors will depend upon two things: (1) the degree of credit expansion permitted, and (2) the volume of unemployed resources. The importance of credit expansion is obvious. With a considerable amount of idle resources, the chief effect of increased expenditures on home-market goods will be a stimulation of output. Some rise of prices will probably occur, since costs will increase as the hitherto idle and presumably less efficient factors are put to work. Any rise of factor prices will appear only at a later date, as the surplus of unemployed agents is gradually absorbed and the competition for their services becomes keener.

By a similar process of reasoning, we can see that in L, provided the tendency toward credit restriction is effective, the prices of home-market commodities and factors will tend

to fall relatively to those of imports and of exports. Increasing demand in B for these two latter types of products will help to maintain their average price level; the decline in demand will thus be concentrated upon the domestic industries. For reasons the reverse of those set out above, any decline in prices will be aggravated the more restrictive is the credit policy adopted and the more numerous are the unemployed factors.

Of the complex of interacting forces outlined in the foregoing passages, each and every one may not be operating simultaneously at any given moment. The process of adjustment is a gradual and cumulative one. This means, on the one hand, that there will ordinarily be some time lag before the loan installments will move entirely in the form of goods, and on the other hand, that this stage of final adjustment will be more promptly reached the more flexible is the credit policy of the countries concerned. If a considerable secondary expansion of purchasing power is permitted in the borrowing country, while some contraction takes place in the lending country, the relative change in incomes and in demands may be sufficient to establish a level of exports and imports which is perfectly consistent with a steady flow of long-term capital. In terms of the illustration we have used, B's imports come to exceed her exports by \$10,000,000 a month, and are paid for by the export of securities of equivalent value.

If, on the other hand, the banks (or the Central Bank) in B prevent an expansion of loans and deposits from taking place, while the Central Bank in L offsets the tendency to contraction with an expansionist policy, the entire burden of effecting the transfer of the loan installments in the form of goods is thrown upon the primary change in purchasing power in B and L respectively. In that event the mechanism outlined would not have a chance to operate smoothly. Only part of the increased supply of exchange (in B) would be required to take care of increased imports and decreased exports. The remainder would probably be used to bring gold from L to B, until the effects of the gold flow accomplished

by sheer economic pressure what voluntary banking policy was not permitted to bring about.

It has been pointed out in the last few lines that for the effective operation of the mechanism of "altered international demands," as Ohlin has termed it, certain requirements of credit policy must be met. It is now necessary to indicate that a special assumption is required, not only to permit the mechanism to work smoothly, but also to get it started at all. That is, even the initial transfer of purchasing power cannot be made without a considerable movement of gold unless a certain condition is met. This condition is that one of three alternatives be present: either the banks (or the Central Bank) in B must be willing to acquire balances in L; or L must have deposits in B against which the new bills of exchange can be offset; or, finally, L must have balances in a third country which are acceptable to B's banks. If none of these alternatives is available, gold must flow. If the banks in B are unwilling, for example, to hold additional balances in L even momentarily, the entire value of the initial loan installment must move in the form of gold, since it will take an appreciable interval of time for the borrowers to spend this installment and thereby to effect a change in the volume of imports and exports. If a temporary increase in L's balances is permitted, then only the gap in the balance of payments not covered by increased imports and decreased exports need — in the absence of the "secondary" expansion of purchasing power — be filled with gold.¹

As a matter of fact, one or another of these alternatives, amounting in effect to a short-term loan from B to L, usually is available. Thus in the decade after the War, the foreign balances of the leading trading countries (England, France, the United States) varied from year to year by several hundred million dollars. By such changes in foreign bank holdings, the initial transfer of purchasing power involved in an international lending operation is made possible. Moreover, at

¹ In the illustration on page 221, \$4,000,000 in gold would have to move, since B's banks permit a brief increase in their foreign balances of \$10,000,000.

least in the past, a flexible credit policy has facilitated the adjustments necessary to permit capital to move in the form of goods. This is clearly shown in the case of Canada's heavy borrowings in the period 1900-1913, when Canadian bank deposits increased far more rapidly than net capital imports. The evidence also points to a similar conclusion with respect to American borrowing between 1860 and 1874.¹

Because the requirements of the "altered international demands" type of adjustment are, if not always, at least frequently met, capital movements can take place with the smoothness which provoked comment from Professor Taussig. That the necessary conditions are not invariably present, however, is made clear by the case of German reparations. One of the reasons why the transfer of reparations payments was of exceptional difficulty after 1928, when foreign loans to Germany practically ceased, was that Germany had no considerable foreign balances upon which to draw, while foreign banks were unwilling to increase their balances in that country. Having inadequate gold reserves, and being in any event prevented by the terms of the Dawes plan from permitting any substantial amount of these reserves to leave the country, the attempt to transfer reparations was effectually checkmated.²

We may now briefly indicate some of the consequences of international capital movements, or more properly, of *changes* in international capital movements. Although the initial source of disturbance (changes in relative interest rates) affects in the first instance the flow of investment funds, the train of events set in motion by the process of adjustment soon leads to a disruption of industrial equilibrium. As a result of alterations in international demands evoked by the initial transfer of purchasing power, the relative profitability of different industries in both the borrowing and the lending

¹ For the evidence on the Canadian and American cases, see Angell, *The Theory of International Prices*, Appendix B.

² For a most interesting discussion of the issues involved in the German reparations case, see the controversy between Keynes and Ohlin in the *Economic Journal*, Volume 39 (1929); also Haberler, *op. cit.*, pp. 66-76.

country is changed. If the altered volume of international investment is to be maintained, a new schedule of rates of industrial production and possibly also a new structure of prices must be brought into being. It is by a transfer of productive agents from the less to the more profitable lines of production in both countries, perhaps accompanied by a permanent alteration of relative prices, including factor prices, that adjustment to the new rate of flow of capital is effected. Once the industrial and price structure has become adjusted to the international movement of capital, so that loans are transmitted in the form of goods, we have a stable or equilibrium situation which may be expected to continue as long as the rate of international lending and borrowing remains unchanged.

In addition to the disturbance of industrial equilibrium brought about by the international movement of capital, a second consequence is to be found in a tendency toward the disruption of monetary equilibrium. If before the period of lending began the effective volume of money, in both the lending and the borrowing country, was such as to promote a high and stable level of economic activity, then any contraction of the means of payment in the one or expansion thereof in the other would tend to bring about a deflationary or an inflationary movement. Under certain conditions a serious depression or boom might result. Where capital moves to a young and developing country, however, as was true of most of the large transfers of the hundred years prior to the World War, it may merely permit a more rapid growth to take place than would be possible but for the loans. Again, if, as is usually the case, the loans are concentrated in periods of active business in the lending country, the deflationary effect of the outward transfer will be confined to restraining the development of a boom.

CHANGES IN INTERNATIONAL DEMANDS

Of the various other sources of disturbance to international equilibrium, let us consider next a lasting change in international demands. By this we mean a shift of the entire

demand schedule in question to the right or left, resulting in a permanently larger or smaller demand on the part of one country for a certain product (or products) of another country (or countries).¹ This shift might take place either gradually or suddenly. As a matter of fact such changes in demand are constantly occurring; but, so far as the mechanism of international adjustment is concerned, they are often imperceptible, though perfectly obvious to the industries affected. This is for the reason that several such changes may occur at the same time, but in such manner as to offset one another, or because still other forces, which taken alone would disturb the equilibrium of the balance of payments, may also operate simultaneously in a counterbalancing fashion. Here we shall consider the effects upon the balance of payments of an important increase in demand taken in isolation.

Suppose, therefore, that the demand in the United States for the products of some foreign country increases sharply and remains at the new high level. This may or may not bring about a rise in the American prices of the goods affected, thus causing trade disequilibrium. It is more likely that there will be some increase in prices to buyers both in the producing country and in the United States. In any event, a persisting increase in demand will stimulate output, thereby raising profits in the industries affected. In this way industrial equilibrium is upset and a tendency is established for resources to move into those more profitable lines of production. We may now turn to an examination of the steps by which equilibrium as between industries as well as equilibrium in the balance of payments is restored.²

¹ Changes in tariffs, which are an important source of disturbance to international balances of payments, may be considered as falling under this heading of changes in international demands. Thus an increase in the American tariff on sugar would appear to Cuba and other exporters of sugar as a decrease in our demand for this commodity, since with no change in their export price they would find it impossible to dispose of as large a quantity of sugar in our market as formerly.

² Equilibrium, that is, in the long-run sense of a flow of goods, services, and investment responsive to balanced relations within and between the separate national economies.

The familiar short-term adjustments will first be called into play, tiding over the initial months of the disturbance in the balance of payments.¹ The continued presence, however, of a cause giving rise to an excess in the demand for exchange will soon or late exhaust the possibility of reaching a balance by means of the reduction of foreign bank balances; short-term loans, and similar sources of a supply of exchange. As the limit of these expedients is reached, an outward flow of gold will — in the absence of any check — tend to develop. Other more basic mechanisms, however, will in the meantime have been called into operation.

Since the increased demand for foreign products is not, we shall assume, being financed by a foreign loan, it can expand only at the expense of the demand for the output of home industries.² To the extent that foreign purchases expand, bank deposits which would have been devoted to buying domestic goods are transferred to the purchase of foreign exchange.² Presumably not all industries producing commodities for the domestic market will be affected equally. Some may suffer a serious reduction in demand, others a slight one; still others may be, at least directly, unaffected.

Consider what will happen in domestic industries which are faced with an adverse market. In those characterised by active price competition, prices and profits will fall, and marginal and sub-marginal producers will tend to be eliminated, until output attains a level consistent with the maintenance of a rate of profit similar to that earned in industries

¹ If the increased demand for certain foreign products is at the expense of our demand for other imports, it is obvious that no problem of adjusting our international balance of payments will arise. It may be, of course, that adjustment will have to take place in other countries. In any event, even if the shift in American demand affects industries all of which are located in the same country, a redirection of resources in that locality will be called for.

² This does not mean that there will necessarily be a net reduction in the total of demand deposits in the United States. For although the increased demand for imports in itself leads to a destruction of demand deposits, these are immediately replaced by the lending out of the proceeds of foreign short-term loans. The funds thus lent, however, are likely to go into the stock exchange or other channels of the capital market rather than into industrial uses, owing to the decline in activity in domestic industries.

not affected by the change in demand. Where, on the other hand, imperfect competition or monopolistic elements are predominant, price maintenance will probably be the rule, the consequences of the smaller demand being seen in reduced profits, output, and employment. While the tendency to the elimination of the less efficient producers is present, it may not operate if all units in the industry are substantial in size and well-equipped financially. Chronic under-employment of resources may continue for some years, until failure to replace worn-out or obsolete equipment, or the secular growth of demand which accompanies an increase in population, or a combination of both influences, restores the level of profits.¹

Whether the depressed industries are or are not highly competitive in nature, there will be set up a tendency toward a reduction in the pay of the factors they use in relatively greatest abundance. The prices of factors used in common with the export industries will also tend to fall, immediately if immobility prevents them from shifting into export lines, ultimately as their movement increases competition in the latter area. So far as the remuneration of characteristic "export" factors is reduced, the prices of exports will likewise fall, thereby increasing the volume (and if foreign demands be elastic, the value) of our exports. At the same time, the reduction in the money incomes of the various agents of production resulting from depression in various domestic industries will lead to a decline in our expenditure on imports.

While these changes are taking place at home, an opposite chain of events will be worked out abroad. To the industries

¹ The primary reduction in incomes consequent upon the appearance of unemployment will tend to bring in its wake a secondary decline in employment in industries whose markets are adversely affected by the loss of purchasing power. To preserve monetary equilibrium, it would be essential for the central banking authorities to pursue a liberal credit policy, with the objective of countering the reduced activity in certain domestic industries by encouraging increased activity in other lines.

It may be noted that the reduced activity in certain domestic industries implies a similar reduction in the demand for working capital (and for long-term requirements as well). This will act as an offset to the tendency toward higher interest rates arising from the decline in the foreign assets and the increase in the foreign liabilities of the American banking system.

for whose commodities our demand has expanded, this will appear as a net increase in demand. This increase in demand is made effective, that is, the means of paying for the increased exports abroad are provided by the expansion in the supply of money in the foreign market. This is brought about, it will be recalled, by the discounting in the foreign (e.g., the London) money market of the finance bills drawn by American banks and by the transfer to foreign ownership of idle American balances abroad. In other words, the transfer of purchasing power effected by the movement of balances and of short-term capital permits the increase in American purchases to take place.

The expenditure of these transferred funds then sets in motion longer-run mechanisms of adjustment similar in nature but opposite in direction to those operating in the United States. The prices of articles now in greater demand and of the export factors used in relatively great abundance in their production will tend to rise, as will likewise the profits of their producers. Higher profits and increasing demand will justify expansion in the industries affected.¹ Both the increased rates of remuneration and the enlargement of output will raise incomes, with the probable result of some additional expenditure on imports from the United States. Foreign export products other than those directly benefited by the increased American demand will be adversely affected by any rise in the price of export factors. The volume of these "other" exports will tend to diminish.

If the decrease in our imports (other than those directly affected by the changes in demand) and the increase in our exports is insufficient to produce a balance in our international accounts, gold will commence to flow, operating through credit restriction to bring down American prices and incomes still farther, until a balance of payments is achieved. Under a "pure" or "natural" gold standard, a restriction of credit

¹ The net effect, abroad, of the transfer of purchasing power is thus inflationary. Whether monetary equilibrium is seriously upset depends upon the magnitude of the force operating (increased American demand) and upon the policy followed by the foreign monetary authorities.

will be brought about promptly, but even with a managed gold standard, credit contraction will ultimately become necessary. Adjustment will be more quickly reached if at the same time the countries gaining gold permit an expansion of credit to stimulate a rise in their incomes.)

The end results from the point of view of the United States will be: a re-allocation of the productive agents among the various domestic and export industries, a balance of payments that is in harmony with the new industrial relationships, probably lowered rates of remuneration of the peculiarly domestic factors and lower prices for their products, and possibly somewhat lower prices of exports and of export factors. Abroad, in addition to a re-allocation of productive resources, prices of exports and of export factors in the countries benefited by the increased demand should be higher. Possibly also commodity prices and rates of pay in their domestic industries will have risen somewhat. With regard to those industries and countries adversely affected by declining American incomes, the reverse will be true. The outcome of the process of change described would, of course, be affected quantitatively though not necessarily qualitatively were we to assume the presence of unemployed factors both in the United States and abroad. For then the rise in the prices of export products and factors in foreign countries would be minimised, while the decline in domestic factor and commodity prices in the United States would be intensified.

CHANGES IN CONDITIONS OF SUPPLY

Other types of disequilibrium in the balance of payments originating in a disturbance to industrial equilibrium are those caused by changes in the underlying conditions of supply, as for example, relative technical backwardness of one country, exhaustion of certain of its important natural resources, or lasting devastation produced by war. Any such change, which for the sake of simplicity we shall assume affects all industries alike, would put the export industries

under severe pressure since it would mean a rise in their costs relative to those ruling abroad. This rise in relative costs would appear to producers in the country in question (A) as a reduction in the foreign demand for their output. For if they attempted to charge a price sufficient to cover costs, foreign buyers would turn exclusively to the lower-cost foreign producers. To maintain their export sales, A's exporters must meet the foreign price.

The reaction to this sort of situation would not be the same in all export industries, but would vary with the competitive nature of each particular industry and with the relative importance of its domestic and its foreign markets. Fully competitive industries would tend to respond by lowering the prices of their products to meet foreign competition. Production would continue, though at a loss (or at least, with subnormal profits), marginal firms would gradually be eliminated, and economic resources would be transferred to other lines. Eventual equilibrium might be achieved with a smaller volume of exports produced at lower cost, provided that wages fell (owing to the pressure of unemployment) or that employers managed to introduce improved technique or equipment. Otherwise, the only apparent solution would be a gradual withdrawal from the export market with output limited to what could be profitably disposed of at home.¹ The more important the foreign market, the more serious would be the necessary readjustments.

Industries characterised by very imperfect conditions of competition, on the other hand, would tend to maintain prices and let the foreign market go. Elimination of individual producers would be slow, especially if the industries concerned were made up of large and well-financed units. As with the similar situation considered in the discussion of a

¹ Something very like this hypothetical situation has ever since the War confronted Britain's leading export industries — cotton textiles, coal, ship-building, and iron and steel. Her case has been complicated by the presence, in addition to some degree of technical backwardness, of many other factors, in particular an overvalued currency (1925-31) and a shift in world demand from coal to petroleum.

change in international demands, chronic under-employment of resources might continue for some time, until a slower rate of replacement together with the secular growth of demand restored a more normal relationship between capacity and output. The seriousness of the situation would be determined, as under conditions of competition, by the relative importance of the foreign market.

Whatever the competitive status of each export industry, there will take place a reduction of exports which will be permanent unless costs are reduced sufficiently, by one means or another, to restore foreign sales to their old volume. In any event, the total *value* of exports is almost certain to be permanently lower, except in the unlikely event that some of A's producers succeed in reducing their costs below the level of their foreign competitors. In each instance also there is a serious reduction of incomes, owing to the presence of unemployment and to the reduction of profits. The export industries generally will be less profitable than domestic industries, which provides the chief motive to a re-allocation of resources (restoration of industrial equilibrium).

In spite of the fact that incomes in A are smaller, it is not to be expected that the decline in exports will be matched by an equivalent decline in imports, since only a portion of the lost incomes was formerly spent on imported products. The primary fall in employment in the export trades will of course tend to produce a secondary reduction of employment, which in turn operates to reduce imports. To the extent to which this occurs, the need for movements of short-term capital or of gold is diminished.¹ No significant increase in

¹ The situation under discussion involves a diminution in the supply of foreign exchange rather than an increase in the demand. The rate of exchange will rise, and as in the other cases discussed, this will tend to evoke additional supplies of foreign exchange by way of inroads on bankers' foreign balances and short-term foreign loans. Funds made available from these sources will fill in the gap in the balance of payments, permitting A's purchases of imports to be maintained in spite of the shrinkage of her exports. Soon or late the processes of adjustment discussed above must rectify the unbalanced relationship of exports and imports, else they will be reenforced by the deflationary effects of an outflow of gold.

long-term borrowing from abroad or decrease in long-term lending by A, either of which would serve to counteract the effect on the balance of payments of the reduction in exports, is to be anticipated. If anything, the export of capital might be expected to increase, owing to the depressed condition of A's export industries and to the tendency for this state of affairs to spread to other fields of production, thus making investment in the securities of other countries appear more attractive. If large individual and corporate incomes, which provide the bulk of savings in industrial nations, are seriously reduced, this tendency might be partially offset.

We must also take into account the disturbance of monetary equilibrium brought about by the decline in output, employment, and incomes. The central banking authorities may, by inaugurating a liberal credit policy (aided perhaps by government expenditure on public works) be able to prevent the deflationary effects of depression in the export industries from spreading throughout the economy. Such action would require courage, for it would have to be undertaken in the face of a tendency for the central bank's foreign balances and gold reserves to decline. Moreover, the policy itself, if successful, would increase this foreign drain by maintaining the level of incomes and thus the demand for imports, as well as by reducing the stimulus to inward movements of short-term capital (low instead of high discount rates). The natural policy under the implicit rules of the gold standard would be just the opposite: namely, an attempt to encourage the inflow and discourage the outflow of short-term funds by the introduction of measures designed to raise short-term rates of interest (open-market sales of securities, raising the rediscount rate).

Here we gain our first glimpse of the sort of dilemma which may frequently arise to plague the monetary authorities of a gold-standard nation. Shall they choose to promote, by every means available to them, the maintenance of monetary equilibrium within the country, with the possible result that the foreign drain on the gold reserves of the country may

necessitate the abandonment of the gold standard? Or shall they take action which is calculated to reduce the strain on the central bank's reserves and thus to preserve the gold standard intact, but which inevitably reinforces powerfully operating deflationary forces? This dilemma poses an issue of major importance — the compatibility of the gold standard with an adequate degree of monetary autonomy — an issue which we shall examine at some length in a later chapter.¹

Thus we see that what begins as a disturbance in the industrial sphere (technological backwardness, etc.), upsetting the balance between industries and dislocating the balance of payments, tends through its consequences to disrupt the operation of the economy as a whole. A central banking policy designed to facilitate the transfer of men and resources from depressed to more active industries and to maintain general business activity at as high a sustainable level as possible (*i.e.*, to restore industrial and monetary equilibrium) tends to hasten the decline of exports, sustain the level of imports, and thus to accentuate the initial disturbance in the balance of payments. Movements of short-term capital to perform the function of temporary adjustment are made all the more necessary, yet at the same time are retarded. The gap in the balance of payments must somehow be filled; the rapid exhaustion of the country's foreign balances and depletion of its gold reserves appears inevitable. In the end, the gold standard may have to be abandoned. Adjustment to the price disparity which started the trouble will then be reached *via* an alteration in the relationship of the maladjusted country's currency to the currencies of other countries (*i.e.*, by a change in exchange rates).

On the other hand, a central banking policy calculated to guard the country's gold reserves by attracting foreign short-term capital increases the difficulties of industrial readjustment by lowering the level of business activity in industries toward which idle export factors might move. A restrictive credit policy, by stimulating latent and active deflationary forces,

¹ See Part II, Chapter XI.

tends to bring about general deflation. Perhaps in the end such a line of attack might solve the problem of a continuing disequilibrium in the balance of payments by forcing down costs in the export industries sufficiently to bring exports to a level adequate to keep the international accounts in balance without the need for short-term adjustment items. If, however, costs are resistant to downward pressure,¹ the outcome may be a prolonged period of industrial stagnation, with no fundamental adjustment taking place either in industry, in the monetary field, or in the balance of payments, and with a continuing gap in the international accounts filled by an inward movement of short-term capital from abroad. This was England's experience in the late 1920's under just such a policy, and there is no reason to believe that under similar circumstances another country might not labor under the same difficulties.²

Sufficient has been said in the foregoing pages to indicate the nature of monetary disequilibrium and how, once established, such disequilibrium can affect a country's balance of payments. Moreover, fuller discussion will be accorded this topic in a later chapter.³ Nonetheless, certain aspects of monetary disequilibrium, in particular its relation to the balance of payments, require at least brief systematic treatment at this point.

MONETARY DISEQUILIBRIUM

Disturbance to monetary equilibrium in one country affects its balance of payments in several ways, certain of which offset one another. An increase in the volume of effective money which brings about an expansion in output and incomes tends directly, through the expenditure of part of the

¹ As, *e.g.*, wages, transportation charges, public utility rates, and products subject to price control of one form or another.

² I hasten to recall the reader's mind to the fact that England's problem was complicated by overvaluation of the pound and by adverse changes in international demands. Without these complications, her troubles would doubtless have been less severe, though of the same basic nature.

³ Part II, Chapter XI.

additional incomes on internationally-traded commodities, to increase imports and decrease exports. The balance of the international accounts is disrupted. The rate of exchange rises, and a mobilisation of foreign balances, an inflow of short-term capital, and possibly an outflow of gold serve to increase the supply of exchange needed to meet the relative increase in the demand therefor.

As output, employment, and incomes increase, this upward movement in the level of business activity serves to reenforce itself. Investment prospects improve as the increasing demand for goods gives rise to higher profits from production. Prices on the stock market will tend to reflect the higher level of business earnings, which at the same time act as a stimulus to an inward movement of long-term foreign capital. This inflow of long-term capital (probably directed principally into stocks rather than bonds) may entirely replace the initial movements of short-term funds. Thus after a period of time varying with the speed with which profits rise, the initial monetary disturbance, which at first upset the equilibrium in the balance of payments, brings into play a force which performs the rôle of restoring balance.

Equilibrium in the balance of payments may, however, be achieved by another route: namely, through the effects of a possible spread of increased business activity to other countries. An extension of the area of more active business tends to be brought about in two ways as a consequence of the disturbance in the first country's (A) balance of payments. The expenditure of some portion of A's larger income on imports gives a direct stimulus to an expansion of industry abroad. Moreover, the international transfer of purchasing power which occurs as part of the short-run mechanism of adjustment provides foreign business men with additional funds for increased operations and is thus definitely of an inflationary tendency. If any gold moves from A, this tendency is reenforced.¹

• ¹ Naturally, the strength of these inflationary forces abroad will depend upon the economic importance of A, the country in which the upswing starts. Also

Provided these forces succeed in inaugurating an expansion of industrial operations in whatever area they affect, this area (perhaps consisting of several countries) will now tend to have an adverse trade balance. But this will assist in the adjustment of A's balance of payments, since her exports will increase. If the increase in incomes abroad is equal to the increase in incomes within A's borders, the balances of payments of all the countries involved will tend to be brought into equilibrium by means of changes on the goods side. The underlying situation everywhere, however, is by hypothesis characterised by monetary disequilibrium. If unchecked, the boom may proceed on its upward course until all countries are involved in collapse and depression, to some degree synchronised by a process of reactions opposite in direction to those just considered.

Again, it should be noted that the spread of boom conditions outside the country where they originate (A) will tend to check the movement of long-term capital in that direction, since more attractive opportunities for investment will now be available over a wider area. Instead of an inflow of long-term capital, a readjustment in the relation of exports and imports will restore equilibrium in A's balance of payments. If, on the other hand, the inflationary tendencies do not spread from A to B, C, D, etc., the export of long-term capital from the latter countries to A will, by decreasing the availability of capital for home investment and thereby raising long-term interest rates, exert a deflationary influence in the capital-exporting countries. This will neutralise the effect of the inflationary forces emanating from A. Whether, in regions external to A, expansion or contraction dominates or whether the two sets of forces offset one another depends upon the response to the initial impetus — the increase of A's imports and the decrease in her foreign balances and in her gold reserves. This cannot be determined in advance, to be reckoned with is the relative importance in A of domestic and of international trade. The smaller is the proportion of foreign to domestic trade, the more readily will an inflationary movement take hold within the country, and the less strong will be the tendency for it to spread to other nations.

but will vary with the sensitiveness of different national economies to such stimuli, with the state of business conditions when these stimuli operate,¹ and with the policy of the central banks. In any event, if business abroad responds positively to the initial impulses, the prospect of a movement of long-term capital to A is diminished and the chances of a general spread of rising business activity are greatly increased.²

SUGGESTED REFERENCES

Taussig, F. W., *International Trade*, Chapters 17-25.

Ohlin, Bertil, *Interregional and International Trade*, Chapters XIX-XXII.

Angell, James W., *The Theory of International Prices*, Chapter XVI.

White, Harry D., *The French International Accounts, 1880-1913*, Chapter I.

Haberler, Gottfried von, *The Theory of International Trade*, Chapters V, VII, VIII.

Iversen, Carl, *International Capital Movements* (Oxford University Press, 1935), Chapters I-III, IV, VI, XII.

Currie, Lauchlin, "Domestic Stability and the Mechanism of Trade Adjustment to International Capital Movements"; Part I, Chapter V, in *Explorations in Economics*.

Wilson, Roland, *Capital Imports and the Terms of Trade* (Melbourne University Press, Melbourne, 1931).

Whale, Barrett, *International Trade*, Chapters III-IV.

Harrod, R. F., *International Economics*, Chapter VI.

Beach, W. Edwards, *British International Gold Movements and Banking Policy, 1881-1913* (Harvard University Press, Cambridge, 1935).

¹ If business in B, C, D, etc., is "normal" or on the up-grade, there is a strong probability that the expansionist influences will take hold promptly. If, on the other hand, business activity is at a low level, their effect will be delayed.

² For a fuller discussion of the international transmission of industrial fluctuations, see Haberler, *Prosperity and Depression* (League of Nations, 1937), Chapter 11. A very interesting and ingenious analysis of the effects of international capital movements upon industrial stability is contained in the contribution to *Explorations in Economics* (McGraw-Hill, 1936) by Lauchlin Currie, "Domestic Stability and the Mechanism of Trade Adjustment to International Capital Movements." This is the earliest of a number of recent attempts to bring into relationship with one another the theory of the business cycle and the theory of international trade.

CHAPTER XI

THE MECHANISM OF INTERNATIONAL ADJUSTMENT UNDER PAPER-CURRENCY CONDITIONS

THE basic principles underlying the determination of the rate of exchange were formulated in Chapter VIII, where one of the leading points brought out was that the rate of exchange is merely a price, and that, like any price, it is fixed as usual by the interaction of the forces of supply and demand. Moreover, it was made clear that the level at any time of the demand and of the supply of exchange, and hence of the rate of exchange, is affected, through the forward exchanges, by anticipations as to the nature of the forces likely to affect it in the future.

In the succeeding chapter, we saw that the general principles of the supply and demand analysis explained the determination of the rate of exchange under gold-standard conditions. These same principles also apply when the currencies of the countries in question are on an inconvertible paper basis. There is, however, at least one important difference between the two cases. The limits to the range of fluctuations in the rate of exchange between gold-standard countries, provided by the gold import and export points, are not present in the case of paper exchanges. It would appear, therefore, that the rate of exchange as between nations on the paper standard is free to fluctuate without limit. The question may be and indeed has been asked, however: Is this true, or is there some sort of limit, perhaps flexible, imposed upon movements of the exchange rate under these conditions? An attempt to answer this question will be the first task, and one of the major concerns, of this chapter.

THE DOCTRINE OF PURCHASING POWER PARITY.

During the years immediately after the War there was enunciated a doctrine which holds that in the case of the exchanges between countries using inconvertible paper currencies, there is a basic rate of exchange from which the actual day-to-day rate may deviate, but toward which the actual rate constantly tends as a norm or equilibrium rate.¹ According to this view, while there are no rigid limits to fluctuations similar to the gold export and import points, yet the market rate cannot depart widely from the basic rate, called the purchasing power par. Any variations from that rate, it is held, promptly set into action forces tending to drive the rate back to the normal level. Thus the purchasing power par of exchange occupies a place similar to that of the mint par. It is a rate of exchange about which actual rates fluctuate in response to the play of the forces of supply and demand, but from which they cannot stray very far.²

How do we know the value of this par of the paper exchanges? The mint par of the gold standard is determined by the relative weight of the gold in the two currency units compared. No such simple calculation can be used to derive purchasing power par, however. In the case of paper exchanges, the point of departure for determining this equilibrium rate is as follows: It is to be presumed that the reason for wanting a foreign currency is its power to command goods in the foreign country, that is, its purchasing power. The purchase of such a currency is an exchange of domestic purchasing power for foreign purchasing power. Hence

¹ The theory of purchasing power parity was first developed in the opening years of the nineteenth century by a group of English writers, its clearest statement being provided by John Wheatley (1803). The formulation of this doctrine during the War years by Professor Gustav Cassel consequently must be regarded as a revival rather than as a completely original statement of the theory. (See Angell, *The Theory of International Prices*, pp. 52, 186.)

² Attention should be called to the fact that while under the gold standard there is no tendency for the actual rate to approximate to mint par, but rather to stay within a certain range of that rate, under paper-currency conditions purchasing power par is a rate toward which actual rates will constantly tend.

the relative purchasing power of two currencies should be the chief factor determining the exchange rate, which is merely the price of one currency in terms of another. Moreover, that rate of exchange which expresses the relative purchasing power of two currencies will be a basic equilibrium rate, for the reason that any divergence from such a rate will undervalue one currency in terms of the other, thereby stimulating a demand for the undervalued currency and driving the exchange rate toward the equilibrium position.¹

To illustrate, let us suppose that Great Britain and the United States are both using inconvertible paper currencies, and that an exchange rate of \$5.00 to the pound exactly equalises the purchasing power of the two currencies. This means that a given sum of pounds spent in Britain will purchase as many goods in general as five times as many dollars expended in the United States (ignoring transport charges). If, however, the purchasing power of the two currencies remaining the same (that is, assuming no change in the price levels in the two countries), the rate of exchange should fall to \$4.00, the pound would be undervalued, since one could for this sum buy as many goods in Great Britain as it would require \$5.00 to purchase in the United States. Increased purchases of sterling by Americans, decreased purchases of dollars by the British, would quickly be stimulated, this increase in the demand and decrease in the supply of British currency continuing until the rate of exchange reached \$5.00 again. Equilibrium would then be reestablished, with each country exporting only those commodities which it could produce at an absolutely lower money cost.

*¹ This formulation of the theory of purchasing power par is what Professor Pigou calls the "positive" part of the doctrine. ". . . whereas the positive doctrine asserts that exchange will be in equilibrium at any time if the rate then ruling makes the external and internal purchasing powers of sterling equal, the comparative doctrine asserts that, if we start from a position of equilibrium and conditions alter, the consequent *change* in the norm of exchange will be proportionate to the *change* in the ratio between sterling and dollar prices." (A. C. Pigou, "The Foreign Exchanges," *Quarterly Journal of Economics*, Vol. 37 (1922), p. 64. Also reprinted in *Essays in Applied Economics*, P. S. King & Son, London, 1930.) The comparative form of the doctrine is elaborated in the next paragraph but one in the text.

(In actual practice, the only method of comparing the buying power of two currencies is by means of indices of prices.) These permit the comparison, however, not of the absolute levels of purchasing power at a given date, but only of *changes* in purchasing power relative to some previous date. Hence the comparative form of the doctrine of purchasing power par, which asserts that changes in the equilibrium rate of exchange must conform to changes in the ratio of price levels, is the one which is relevant to practical problems.

To compute that rate of exchange which will equalise the value of two currencies now (the current purchasing power par), we must multiply some previously existing equilibrium rate of exchange by the relative change in price levels since the equilibrium date. The previous equilibrium rate may be chosen on the basis of objective evidence indicating that, at that time and at that rate, the balance of payments of each of the two countries was in substantial equilibrium. Expressed as an arithmetical formula, purchasing power par = old equilibrium rate \times ratio of price levels in the two countries, or, $R_p = R_b \times P_1/P_2$.

Again using our hypothetical illustration of Great Britain and the United States under paper-money regimes, let us assume that in a certain year (I) the rate of exchange at \$5.00 produced equilibrium in the international accounts of the two nations. Assume also that several years later (say year VI) the price level in the United States has risen to twice its height in the year I, while the British price level has remained unchanged: Purchasing power par for year VI (R_p) then equals $\$5.00 \times 200/100$ or \$10.00. If instead of rising 100%, prices in the United States had risen only 50% while in Great Britain the index had increased by 20%, our calculation would be $\$5.00 \times 150/120 = \6.25 . Incidentally, this change in the illustration indicates clearly one peculiarity of purchasing power par: It is not a stable, unchanging par, but rather one varying with relative fluctuations in price levels.

- DEVIATIONS FROM PURCHASING POWER PAR

Even the most ardent advocate of the purchasing power parity doctrine does not deny that the actual rate of exchange may deviate from the theoretical norm. Thus Cassel, for example, distinguishes deviations both of a permanent and of a temporary nature.

A permanent departure of the day-to-day rate of exchange from the par determined by relative price levels will result whenever the movement of trade is relatively more obstructed in one direction than another. Such obstructions might be provided either by restrictions on exports (direct prohibition, export duties, licensing of exports) or by impediments to importation (customs duties, import quotas, etc.). Export restrictions, since they reduce the uses to which foreigners can put the money of the country imposing them, tend to lower the international value of its currency. That is, the demand for its currency in the foreign-exchange markets of the world is diminished and its price thereby lowered. Import restrictions operate in an opposite manner. The country applying them in effect forbids its citizens the free use of their holdings or acquisitions of foreign money. Such a limitation of the right of purchasing abroad reduces the demand for foreign currency, or, from the point of view of other nations, causes a diminution in the supply of exchange on the country restricting imports. The rate of exchange on that nation thus tends to rise.

The under- or overvaluation of the currency of a country introducing either of these types of trade obstruction is permanent in the sense that it will continue so long as the obstruction is present. There is, of course, no reason to expect a deviation from purchasing power par of this nature to be self-correcting, since the continuation of the trade restriction effectively prevents any readjustment. Thus, to continue our earlier illustration, if purchasing power par between Great Britain and the United States were \$5.00, while the imposition in the former country of restrictions

on the export of goods had caused the exchange rate to fall to \$4.50, there would be every reason to expect it to remain at this undervalued level. Under ordinary circumstances, such an undervaluation of the pound would lead to considerable increase in the demand for British currency, since in view of the relative levels of prices, previously imported commodities would be obtainable at bargain rates, while a wide range of goods (in addition to the normal imports) could now be obtained more cheaply in England than in the United States. In the case under consideration, however, any such automatic readjustment is ruled out, owing to the fact that even though pounds sterling can be obtained at what seem to be bargain-counter rates, they cannot be put to their customary use.¹

In addition to these permanent deviations of exchange rates, there are many possible reasons for expecting temporary deviations. Thus the world may, because of the budgetary situation in a given country, anticipate a further internal depreciation of its currency. Individuals who have claims upon the inflation-ridden nation will hurry to dispose of them; those who have payments to make in that country will postpone settlement of them. Thereby the supply of exchange is increased at the same time that the demand is diminished, and the anticipated internal depreciation becomes foreshadowed in an earlier external depreciation of the currency. Likewise, excessive speculation in a depreciated currency may serve to push its value temporarily above or below the paper par. Again, if a country dumps its currency upon the foreign-exchange markets at any price obtainable, in a desperate effort to secure foreign funds, the

¹ The full impact of export restrictions would naturally result only if these trade obstructions were of an all-round, uniform character, applying equally to all existing or potential exports. If they were imposed only on current actual exports, or merely on certain ones of these, undervaluation of the pound would stimulate exports of British products whose prices at the undervalued rate of exchange were now lower than those of similar commodities abroad. These opportunities of selective new uses of the undervalued currency would thus bring about a revival in the foreign demand for sterling and a recovery of some part of the initial decline in the rate of exchange.

appearance of this abnormal supply of exchange will tend greatly to depress the rate. In the years immediately after the War, Germany was a particularly serious offender in this respect. Indeed, she added insult to injury when, by the imposition of drastic export restrictions, she in effect refused to honor the currency she had sold abroad in such large quantities.

Having now dealt at least briefly with various types of deviations from the normal or equilibrium rate of exchange, it will be well if, before proceeding to a consideration of certain leading criticisms of the purchasing power doctrine, we attempt to assay the significance of that theory. If the doctrine of purchasing power par is correct, it means that -- with the exceptions noted -- the rate of exchange will be determined by the relative purchasing power of the two currencies compared. Moreover, since the forces which determine the internal purchasing power of a currency (*i.e.*, the price level) are to be found primarily in the monetary and fiscal policies followed, it is implied that these policies are the basic determinants of the rate of exchange.

Up to this point our attention has been directed primarily to an understanding of a widely-held theory of the normal equilibrium rate of exchange under paper-currency conditions. The question naturally arises, however, how valid is this doctrine? Does it furnish a reliable guide as to what we may expect the level of exchange rates to be, allowing for the effects of disturbing influences? Are the reasons advanced to support the supposed dominance on the foreign-exchange markets of comparative price levels convincing?

The theory of purchasing power par has, as a matter of fact, by no means gone unchallenged. To an examination of the leading criticisms of this doctrine we shall now turn, attempting in the process to arrive at a satisfactory conclusion as to whether purchasing power par may legitimately be regarded as a true norm or equilibrium rate of exchange toward which current rates are constantly tending.

CRITICISMS OF PURCHASING POWER PAR

The definitive criticism of the positive form of the doctrine of purchasing power par has been enunciated by Professor Pigou.

If it were the fact that all commodities produced in either of two countries flowed without cost between them, Professor Cassel's positive doctrine would follow immediately. But a large number of commodities not only fail to flow without cost but do not flow at all. There is no necessity, in order that exchange equilibrium may be established, for the internal purchasing power of sterling in respect of these commodities to be the same as its external purchasing power . . .

There is no reason to expect that the prices of the various sorts of non-traded and partially-traded goods will bear the same ratio to the prices of traded goods in different countries. Consequently, there is no ground for assuming that, even in the absence of one-sided obstacles to trade, the rate of exchange which conforms to purchasing power parity, as defined by Professor Cassel, will be identical with, or even in the close neighbourhood of, the equilibrium rate. The positive doctrine of purchasing power parities cannot, therefore, be maintained without reservations and qualifications so extensive as practically to destroy it.¹

Although this argument effectively destroys the positive form of the doctrine, it does not necessarily mean, as Professor Pigou goes on to state, that the comparative part of the theory is likewise invalid. For even though we calculate purchasing power par by means of index numbers which include both traded and non-traded goods, nonetheless if the prices of both kinds of commodities move together, changes in the price ratios will necessitate a proportional change in the exchange rate if equilibrium in trade is to be preserved.²

A proviso introduced above, to the effect that the prices must be assumed to move together, suggests a really damaging

¹ *Op. cit.*, pp. 64-65.

² It is obvious that if the indices used to calculate purchasing power par included only international prices, then, provided they moved together, the comparative form of the doctrine would become a truism. For changes in the exchange rate *must* correspond exactly to changes in the prices of internationally-traded goods, again provided the latter move equally.

line of criticism of the comparative doctrine of purchasing power par. Unless all the prices included in the index numbers rise or fall in exactly the same degree, that is, unless the structure of prices remains the same, changes in the quantities purchased of the various commodities would be almost certain to result in a different total demand for and supply of exchange in the foreign-exchange markets, with a different equilibrium rate of exchange as a consequence. Now as a matter of fact a general rise or fall of prices is always accompanied by a dispersion of prices, that is to say, by an unequal rate of movement, some rising (or falling) more than the average, some often even moving in an opposite direction. In view of this, there is little reason to expect a change in the price level of a country's internationally-traded commodities to leave the foreign demand for these goods unaltered. Only on the highly improbable assumption that the elasticities of foreigners' demands were such as exactly to neutralise the effects on purchases of changed price relationships (accompanying a change in the price level) would the total demand for its exchange remain the same.¹

It is only fair to point out that the necessity of assuming an unvarying price structure was clearly perceived by Pro-

¹ To illustrate, assume the United States and Canada using paper currencies, with purchasing power par at \$1.00, and assume only two commodities, A and B, sold by Canada. Let the American demand for each of these products, at a price of \$1.00 a unit, be 1,000,000 units. The total American demand for Canadian exchange will then amount to \$2,000,000, which we may presume to be matched by an equal demand on the part of Canada (*i.e.*, supply of Canadian exchange in the U. S.). If now the price of A rises to \$1.20 and that of B falls to \$0.80, an index of Canada's internationally-traded goods will remain at 100, and no change will take place in purchasing power par. If, however, at \$1.20 the demand for A recedes only to 900,000 units, while the demand for B expands to 1,300,000 units at the new price of \$0.80, the total American demand for Canadian exchange will increase to \$2,120,000, thereby driving up the rate. As it rises, Canadian purchases of American products will be stimulated, and a new equilibrium rate somewhat above the old \$1.00 will be established.

For the calculated purchasing power par (still \$1.00, since no change in the relative price levels has occurred) to continue to represent an equilibrium rate, it would have been necessary for the shrinkage in the American demand for A to offset exactly the expansion in the demand for B. This situation would have been realised with a demand for A (at \$1.20 a unit) of 800,000 units. Any such result, however, would clearly be quite accidental.

fessor Cassel. Thus in discussing the calculation of par after a period of currency depreciation he says:

In doing so, to be exact, we must presuppose that no other changes have taken place. If in each country prices are unaltered in their relation to one another, but have only undergone a common rise, then there is nothing to prevent our supposing the balance of trade between the countries to be unaltered.¹

Now while in times of extreme inflation this assumption may perhaps be justified for rough work, it is never entirely valid, and under more normal circumstances is quite unwarranted. For relative prices within each country are constantly varying. And whether the price levels rise, fall, or remain the same, these variations in price structures may seriously affect the total purchases by each country of another country's goods, thereby altering the demand and supply of foreign exchange which meet in the foreign-exchange market and determine the exchange rate.

The most damaging criticism of the purchasing power parity doctrine aims directly at its fundamental assumption. This, repeated in Cassel's words, is:

Our willingness to pay a certain price for foreign money must ultimately and essentially be due to the fact that this money possesses a purchasing power as against commodities and services in that foreign country.²

Against this it has been urged³ that foreign purchasing power is wanted, not to buy commodities in general or in the abstract, but for the purchase of particular commodities. Foreign-exchange rates, in other words, reflect a demand for purchasing power for specific purposes, not for general, all-round use. With respect to this kind of demand, any price level is simply irrelevant; what is significant is the price of each individual good or service. This much was intimated in the foregoing paragraph, where it was shown that individual

¹ Cassel, Gustav, *Money and Foreign Exchange after 1914*, p. 141.

² Cassel, *op. cit.*, p. 138.

³ Ohlin is the first, to my knowledge, to have stated this objection. See his *Interregional and International Trade*, Chapter XXV..

price changes, in the absence of any alteration in the price level, might require for equilibrium in the balance of payments a quite different rate of exchange from the calculated purchasing power par.) Factors, like monetary policy, which affect individual prices and through them the price level, do, "like other variations, alter the supply and demand schedules in the foreign exchange market, and thereby, and only thereby, the exchange rates."¹ Changes in any other factors relevant to the foreign exchange market, such as interest rates, insurance or shipping charges, or even internal freight rates, may, by increasing or decreasing the demand or supply of foreign exchange necessitate an alteration in the rate of exchange which produces equilibrium in the balance of payments, quite without any variation in relative price levels.

The conclusion to which these various criticisms inevitably lead is that the doctrine of purchasing power par does not provide us with a theoretically defensible equilibrium rate of exchange. The weight of critical analysis in the years since the War has been such that the theory no longer commands wide acceptance among economists. While it cannot stand close examination, nonetheless it does retain a limited usefulness. In circumstances in which fluctuations in the value of money predominate over other economic forces, calculation of a purchasing power par may provide a useful first rough approximation of the tendency of the exchange rate between countries on an inconvertible-paper-currency basis. At certain periods, as for example between 1919 and 1923 and even later, inflation in most countries of Europe was the most important single influence affecting individual prices and thereby the course of trade. For these years, then, when it was most popular, the doctrine of purchasing power parity had a distinct usefulness and a limited validity which it can possess only in times of currency disturbances. In addition, it served in this period to disabuse people's minds of a persistent belief that the old pre-War gold parities still represented a normal rate of exchange, and to substitute,

¹ *Ibid.*, p. 550.

in place of this belief a concept of the equilibrium rate more suited to the changed conditions.

If, however, purchasing power par does not provide us with a normal or equilibrium rate of exchange toward which actual rates constantly tend, can it be said that there *is* any such thing as an equilibrium rate under paper currency conditions? The answer, for which the elements have already been suggested, must be rather unsatisfactory to the person who quite naturally likes to have some at least relatively fixed and immutable standard in every branch of affairs. For all we can say is that the equilibrium rate of exchange is whatever rate brings about stable equilibrium in the balance of payments, which means in effect that it must bring the two related price systems (interpreted in the broadest sense) into a stable relationship with one another. Moreover, this equilibrium rate will change whenever there takes place an alteration in the underlying basic conditions. In other words, it will fluctuate in accord with variations in commodity prices, in factor prices, in costs of transfer, in the volume of international loans, or in the level or elasticity of demand schedules. The concrete significance of this conclusion can best be brought out by considering the effects of disturbances to the balance of payments, that is, the mechanism of adjustment to disturbances of equilibrium under paper-currency conditions. To this subject we may now turn our attention.

THE MECHANISM OF ADJUSTMENT

(1) *General Considerations: Stable vs. Flexible Exchange Rates.*—In Chapter IX, stress was laid on the fact that with the appearance of any form of disturbance of the balance of payments, the initial stages of adjustment take the form of movements of short-term capital and balances which in effect bring about a transfer of purchasing power toward the country which would—in their absence—receive gold. These movements are possible because of the comparative rigidity of exchange rates under gold-standard conditions

As these near their upper or lower limits (gold export or gold import points), the risk of further fluctuation in the same direction becomes smaller and smaller, inducing the speculative purchase of funds on the country whose currency is falling in terms of others, and *vice versa.*¹ Changes in the relative level of discount rates resulting from pressure on the balance of payments stimulate a similar movement of short-term credits of a financial rather than of a speculative nature. If an international transfer of purchasing power is not brought about by these means, it will be effected by a flow of gold.

(The opinion has been widely held that under paper-currency conditions, no transfer of purchasing power is possible.) According to this view, the excessive risk of exchange-rate fluctuations precludes financial or speculative movements of short-term funds of an adjusting nature.¹ Gold being no different from silver, platinum, or any other precious metal when it is no longer used as the currency base, transfers of purchasing power by means of gold shipments are also ruled out.² Thus both the principal source of great elasticity in the demand and supply of foreign exchange and the limits on exchange-rate fluctuations are removed when a currency's tie with gold is cut. The only result to be expected to follow an increase in the demand for (or supply of) foreign exchange, therefore, is a rise (or fall) in rates of exchange considerably greater in magnitude than could take place under the gold standard. In place of movements of short-term funds or of gold and the accompanying transfer of purchasing power, movements of the exchange rate would have to provide, in some manner, the means of bringing about adjustment to disturbances of equilibrium.

¹ Though not speculative movements of an inflammatory variety. On this possibility, see pp. 209-214 and Part II, Chapter XI.

² There is an important exception to this. Although several currencies may be divorced from gold, nonetheless the various monetary authorities may continue to use that metal as an international means of payment, though as one having a variable price in terms of paper money. This is especially true when, as in recent years, some currencies are on a paper, some on a gold basis.

Under certain conditions, this conclusion with respect to the possibilities of adjustment would be justified. If, of several paper currencies, each were totally independent of the others and if fluctuations in exchange rates were frequent and large, the picture would fit perfectly. On the other hand, if the monetary authorities in each country successfully implemented a policy of stabilising industrial activity and if other sources of disturbance operated gradually, fluctuations in exchange rates might well be so moderate that bankers would be perfectly willing — on the basis of experience — to lend and borrow abroad and to accumulate and draw upon foreign balances. In these circumstances, the "transfer" of purchasing power mechanism would again function. Similarly, if several paper-currency countries adopt the principle of an exchange standard, with the central bank or some other appropriate agency in all but one country (the reserve country) standing ready to buy or sell the currency of the reserve country at a fixed price, fluctuations in exchange rates as between this group of countries would be ruled out.¹ There would be every reason, therefore, to expect a ready mobilisation of short-term credits between these countries. Again, the transfer of purchasing power would be possible. Indeed, the very readiness of the central banks to provide or accept the currency of the reserve country (and thus, indirectly, the currency of any member of the group) would furnish a direct means of transferring purchasing power internationally. (An increased demand for the currency of the reserve country or of some other member of the group would be met by increased supplies from the reserve holdings of the central bank.)

¹ The terms, "reserve country" and "exchange-standard country," as used in this connection, are Haberler's. See his discussion in *Prosperity and Depression*, pp. 327-331. Either a central bank or an exchange stabilisation fund operated by another government agency, though of course in consultation with the central banking authorities, could perform the function of stabilising the currency. Several countries, including Great Britain and the United States, have for some time been using such stabilisation funds. The so-called sterling bloc, incidentally, may be cited as an illustration of the use of the exchange standard.

Under either of these two sets of conditions, therefore, a disturbance to the balance of payments would cause short-term items to appear, just as under the gold standard, and to perform a similar part in the short-run mechanism of adjustment.¹ Only where the stability of exchange rates has resulted, not from deliberate policy, but from the absence of violent disturbances, would it appear necessary to alter this conclusion, and then only with respect to a sudden large change in the balance of payments. In the event of a sharp disturbance of major proportions, a large fluctuation of exchange rates might be caused, this fluctuation in turn destroying the foundations for the movement of short-term items.

If conditions are such that a disturbance of international equilibrium produces a transfer of purchasing power, the later stages of adjustment will follow the lines made familiar in our study of the gold standard. The expansion of the supply of money in the country experiencing an improvement in its balance of payments leads to an increase in its total income, while monetary contraction abroad effects the

¹ Haberler holds there is a difference between the gold standard and the exchange-standard case, in that tendencies to expansion may be communicated from the reserve country to the exchange-standard countries, but not the other way around. "If an exchange-standard country expands, the reserve countries do not experience an increase in their basic money supply. On the other hand, this expansionary influence still operates in the opposite direction. When the reserve countries expand, the exchange-standard countries will find themselves with an increased money supply and will be tempted to expand also." (*Op. cit.*, p. 330.) Expressed more broadly, any improvement in the balance of payments of the reserve country, although it will lead to a decline in that country's foreign liabilities, will not — as when inward gold movements augment a gold standard country's reserves — result in monetary expansion.

This appears, however, to overlook the fact that the decline in the foreign liabilities of the reserve country itself provides the basis for credit expansion in that country. The reserves of the exchange-standard countries may be held in the form of central bank deposits and / or of commercial bank deposits (in the reserve country). As their demands for foreign currency increase (the reverse side of an improvement in the reserve country's balance of payments), these holdings will be transferred to the ownership of citizens of the reserve country. Formerly idle demand deposits now get into the industrial circulation, while the reserves of commercial banks (in the form of central bank deposits) will be increased, tending to bring about a multiple expansion of loans and deposits.

opposite result. As a consequence of the relative change in incomes, a redirection of international expenditures is brought about which in turn leads to a change in the more flexible items in the balance of payments (chiefly goods and services) such as to bring them into line with the altered international conditions (a new level of capital movements, changed demands, a disruption of the international cost-price structure). Prices of export, import, and domestic goods will tend to change relative to one another, the degree of the price change in the case of any particular commodity depending upon conditions of demand and supply and upon the mobility of the agents of production. Underlying the variations in prices and in commodity movements there goes on a re-allocation of the productive factors in a direction such as to establish a new equilibrium in harmony with the changed international situation.

(2) *Flexible Exchange Rates.* — We may now proceed with an analysis of the process of adjustment when exchange rates are subject to frequent, unpredictable, and rather considerable movements. We may assume that the risk of exchange variations is so great as to eliminate altogether short-term capital movements of an adjusting nature.¹ Under these circumstances, as we have already seen, a disturbance in the balance of payments could only result in a rise or fall of exchange rates; no transfer of purchasing power would be possible. Since maintenance of equality in both sides of the balance of payments is essential, and since no other

¹ This assumption is unreal, in that short-term capital movements of an adjusting nature never cease, except temporarily, even between countries with independent paper currencies. These movements occur owing to the fact that exchange rates between countries with such currencies often exhibit remarkable stability over considerable periods of time. Sometimes, as we shall see later, this stability is brought about by deliberate intervention.

By making the assumption of extreme risk of exchange fluctuation it is possible to bring out more clearly the adjustment function of variations in exchange rates. For the intermediate case of occasional yet not violent fluctuations in exchange rates, together with some movements of short-term capital, both types of adjustment will be operating at the same time; the effects of adjustment will then obviously be a mixture of those separately considered in the text.

means of attaining this result is available, the variation in exchange rates must be sufficient to bring it about.

Let us suppose, then, two nations, A and B, with paper currencies, and with a rate of exchange such that, in the existing situation as to factor prices, commodity prices, and international demands, the movements of goods, services, long-term capital, and miscellaneous items between the two countries are just brought into balance. The introduction of some force disruptive of this state of balance will set up a complex series of reactions, the ultimate consequences of which will vary considerably as a number of relevant circumstances differ. Although a full analysis of the adjustment process must take into account at least the more important of these possible differences, nonetheless certain general tendencies can be distinguished. It seems wise to present first the picture of the more general effects of different kinds of disturbances, reserving for later consideration the qualifications necessary in the light of particular circumstances.

(a) *Changes in International Demands.* — Starting from a position of equilibrium, let the demand of A for certain of B's products increase, not as a result of any expansion of incomes in A, but rather at the expense of some of A's domestic commodities. Activity in the domestic industries thus affected will decline. Under gold-standard conditions, this slump in industrial activity could only be corrected by a credit policy designed to stimulate an offsetting increase in output and employment in other lines.¹ With independent paper currencies, the rate of exchange on B will rise; by making A's goods cheaper abroad, this will stimulate expansion in the export industries, thus counteracting the initial decline in the production of domestic goods.¹

¹ The volume of A's exports will increase provided B's demand for imports is in the slightest degree elastic. The extent of the increase in A's exports will depend upon the elasticities of B's demands. There are two reasons why these may ordinarily be expected to be greater than unity. (1) Since the prices of A's factors are becoming lower in B's money, the range of commodities exported by A will increase. (2) The fact that in international trade there generally exist many alternative sources of supply of any commodity

Imports other than those for which A's demand has increased will decline, owing to the rise in the price of B's currency. This restriction of A's demand for foreign currency, together with the increase in supply furnished by a larger volume of exports, will retard the rise of the rate of exchange on B.

Turn now to a consideration of the probable price changes in the two countries. The prices of A's domestic commodities (or at least of those for which the demand has diminished) will tend to fall, as will likewise the prices of characteristically domestic factors. Export prices in A (including the prices of export factors), on the other hand, will tend to rise; so also will the prices of her imports.¹ In B, those export industries for whose products A's demand has increased will be stimulated; others will be depressed by the rise in the external value of B's currency. Prices of their products will tend to fall, while imports will be cheaper.

In line with the indications given by price changes, a shift of the factors of production will tend to take place. In A, this means a movement out of the depressed domestic industries into the expanding export and import-competing fields. In B, factors will tend to shift from the retarded export and import-competing industries into those lines of production benefited by the change in A's demands.

Depending upon the length of time required for the appropriate re-allocation of the productive factors, equilibrium will eventually be reached, with the exchange rate at a level reflecting the new price structures and the reciprocal demands of both countries.

serves to make the demand for the exports of *any one country* elastic. (Since in this simplified illustration we are assuming a world of only two countries, the second reason plays no part here. It may be included, however, if we let B represent all countries other than A.)

¹ The end-result will in each case depend upon cost conditions in the relevant industries, and upon the strength and elasticity of home and foreign demands. This applies to price changes in B as well. Different assumptions with regard to these factors will lead to considerable differences in the outcome. In the appendix to this chapter we consider the qualifications to the above broad conclusions necessitated by the introduction of these variables.

(b) *Changes in Conditions of Supply.* — Consider now a second situation already analysed in terms of the gold standard: namely, technological backwardness in country A, affecting all of her export industries. This will be tantamount to a diminution in the demand for her exports, and will result in the appearance of smaller supplies of exchange on the foreign-exchange market. Again, the rate of exchange on B will rise. Imports will tend to rise in price and to diminish in volume, thereby furnishing a stimulus to the expansion of A's import-competing industries. Export industries, on the other hand, whose increased costs provided the impetus to change, will be enabled by the lower external value of A's currency to continue in business without major change and without any revision in technique or in the payments to the factors of production.

Under gold-standard conditions, it will be remembered, either a contraction of exports and a shift of the factors to other industries or a downward revision of costs (payments to the factors) became necessary. This adjustment was effected at a cost of lower money and real incomes, after a period of unemployment and business stagnation. Under a paper-currency regime, on the other hand, it appears that no pressure on costs is necessary. Thus it is possible to avoid the unemployment and depression which ensue when, as is today generally the case, wages and other cost elements strongly resist a downward movement. It would not be true to conclude, however, that flexibility of the exchanges instead of flexibility of factor prices permits adjustment to be achieved without any cost whatever. The cost of adjustment is to be seen in a worsening of the barter terms of trade. A's import prices are now higher, which means that to acquire a given volume of imports, a larger volume of exports must be given.¹

(c) *Capital Movements.* — Let us next examine the effects of a large and continuing movement of capital from one

¹ One is obviously led to the question, under which set of currency conditions is the cost of adjustment to international disturbance least? This and related considerations are reserved for discussion in Part II, Chapter XI.

paper-currency country to another. Assume England¹ suddenly begins lending large annual sums to the United States, the preceding position having been one of equilibrium with the rate of exchange at \$5 to the pound. If the initial installment is very large and the demand for sterling inelastic over very short periods, the rate may drop precipitately, say to \$4. There is good reason to expect such an outcome, for apart from movements of short-term capital, which we have ruled out of the current discussion, the demand for a foreign currency is very likely to be far more inelastic over very brief periods of a few days or weeks than over a somewhat longer interval. The chief source of elasticity in the demand for foreign exchange (in the absence of short-term capital movements) is in the demand for imports. To make this elasticity effective, the prices of imports must decline in terms of the importing country's currency. This will occur immediately, in the present illustration, only if English exporters quote prices in sterling. Even then, it will take some time for American importers to increase their orders, and still more time will elapse before they enter the exchange market as buyers of sterling.

The initial large decline in the sterling rate (from \$5 to \$4) will, however, set in motion price changes which will call forth the underlying elasticity in both the demand for and the supply of sterling. A dollar will in England now be worth 5 shillings instead of 4. English exporters who have been quoting prices to American buyers in dollars will receive a bounty which competition will reduce at a pace determined by the amount of unemployed factors available in the export industries. If the factors were fully employed at the outset, the determining elements become the relative size and elasticity of domestic demand for export products and the rate at which factors of production can be transferred from domestic and import-competing industries to the export industries.

¹ To permit us to refer to changes in exchange rates in terms of currencies with which everyone is familiar, we use the names of actual countries instead of letters. The original assumptions applying to A and B are in no way altered.

On the other hand, if exporters in England have followed the practice of quoting prices to American buyers in terms of sterling, they will experience an expansion in the foreign demand for their products. In the short run, at least, this will tend to raise costs. Sterling export prices will rise temporarily, which will mean that the dollar prices of English exports will fall by less than the 20% depreciation of sterling exchange. As costs are reduced, both the sterling and the dollar prices of English exports will decline. Thus the outcome with respect to export prices is the same whichever method of price quotation is used. ✓

American exporters, on the other hand, will be severely penalised by the fall in the value of sterling. To maintain the same volume of foreign sales, they must lower dollar prices on their products 20%. Price maintenance in the United States will mean higher sterling prices to English importers and an inevitable decline in their purchases. Whether dollar prices of exports are reduced or maintained will depend on the competitive nature of American export industries. Those featured by very imperfect conditions of competition will tend to maintain prices and contract output. Highly competitive export industries will be forced to reduce prices, the speed of price reduction being dependent upon the relative importance of the home and foreign markets and their elasticities of demand.

In both countries, a shift in the distribution of the productive factors will be stimulated. The relative prosperity of England's export (and import-competing) industries will draw factors from her domestic industries. These will tend to suffer a decline in activity, owing to the export of capital which might otherwise have been available for home investment. In the United States, the trend will be in just the opposite direction. Here the funds provided by the loan from England furnish the financial resources necessary to absorb labor and capital released from the depressed "international" industries (export, and import-competing) or to increase the employment of factors hitherto idle.¹

¹ It may appear contradictory to speak of funds provided from an international loan, while at the same time assuming that no international transfer of purchasing

In both countries, again, stability in the general level of industrial activity and income is maintained, while under the gold standard, expansion tends to take place in the capital-importing country, contraction in the country exporting capital.¹

Finally, as with both types of disturbance already discussed, elasticities of demand will chiefly determine the final position of the rate of exchange. The initial fall in the sterling rate was large because the increased supply encountered a power can take place. There is, however, no contradiction. It will be recalled that the "transfer" of purchasing power effected by short-term capital movements involves, or rather is, a relative expansion of the supply of money in the country making the short-term loans. In the case under consideration, no such transfer of purchasing power is required. Instead, the loan (long-term) is transmitted in the form of goods. The dollars offered by importers for sterling are, in effect, turned over to exporters and to Americans who are borrowing abroad. These latter enter the exchange market with a supply of sterling bills, thereby driving down the price of sterling. The exchange rate must fall sufficiently to maintain equality in both sides of the balance of payments, which means that the available dollars offered by importers for sterling are divided between exporters and borrowers in proportion to the supplies of sterling they put on the market. This comes to the same thing as saying that the excess in the value of imports over exports provides the investment funds wanted by American borrowers.

¹ In his interesting paper, "Domestic Stability and the Mechanism of Trade Adjustment to International Capital Movements," Dr. Lauchlin Currie differs from this conclusion. "If an increase in home investment occurs simultaneously with the increased availability of capital, the decrease in the demand for goods, in employment, in business disbursements, and in incomes, consequent upon the rise of the exchange rate, is offset. Domestic production remains unchanged but a larger portion is retained at home and/or more imports are secured."

"The maintenance of stability depends, it will be noted, upon the synchronization of decreased and increased expenditures — upon immediate shifts of factors of production with no loss of money income. Such synchronization appears unlikely to occur. The restrictive repercussions are immediate. The offsetting repercussions work through the time-consuming interest rate-capital issue mechanism. Moreover, increased availability of capital is unlikely to be very effective in stimulating investment when sales are decreasing and foreign competition is increasing." (*Explorations in Economics*, Part I, Chapter V.)

Against this view it may be urged that the international borrowing would not have been undertaken unless the prospects for profitable investment were favorable. The additional supply of foreign exchange, whose appearance on the market drives down the exchange rate (or up, in Dr. Currie's sense of the sterling price of dollars), merely provides the wherewithal for carrying out investment plans which have already been made. If these plans are not promptly executed, the "synchronization of decreased and increased expenditures" will of course not develop. In that event the borrowing will cease or at least be appreciably retarded, and the rate of exchange will tend to revert to its original level.

temporarily inelastic demand for exchange. If the American demand for imports is elastic, then as the prices of English goods fall, American expenditures on imports will increase. That is to say, an elastic demand for sterling appears, tending to drive up the dollar-sterling rate toward its original level. The extent to which the exchange rate rises will depend upon the way in which the supply of sterling responds to the new and more elastic demands. If the supply is very inelastic (reflecting an inelastic English demand for imports), the rate will rise considerably. The more elastic is the English demand for imports, the more rapidly will the supply of sterling increase, and therefore the sooner will the rate-raising influence of an elastic American demand for imports be checked. Since, for reasons already given, the demand of any country for the imports of any other country is likely to be elastic, the rate of exchange will in normal circumstances tend to rise only moderately from the initial "impact" rate.¹

Taking a broad view of the results of the processes of adjustment, we see that, as in the gold standard case, the loan is transmitted "in the form of goods," through a relative expansion in the exports of the lending country. Lending may continue at a constant rate, once the adjustments are worked out, with no further changes in relative prices or in the rate of exchange. Import prices in the lending country are relatively higher than formerly, in the borrowing country lower than before. Changes in particular prices, both of commodities and of factors, may also take place in both countries, owing to two facts: first, that some industries may encounter increasing, some decreasing, and some constant costs, and second, that imperfect mobility of the factors within each country may result in fairly long-run changes

¹ This is a statement in general form of the principles worked out in an illustration by Professor Taussig, in which, because he tacitly assumes an inelastic English demand and an elastic American demand for imports, the rate of exchange rises from the "impact" rate almost to the original equilibrium rate. His numerical illustration is well worth consulting. See his *International Trade*, pp. 358-362.

in relative factor prices.¹ (Therefore we may say that, the rate of exchange finally established must be one which reflects the reciprocal demands of both countries in relation to any changes in commodity and factor prices occasioned by the processes of adjustment.)

(d) *Monetary Changes.*—To study the effects of inflation or deflation, it is unnecessary to start with the assumption of full employment in both countries. We need only assume that whatever is the level of employment in either country, in one of them there occurs an expansion (or contraction) of the effective supply of money. That is, we are concerned with relative inflation, or perhaps better, with the effects of changes in monetary policy.

Starting, then, with a given level of employment in A and B, let us assume the successful introduction of a policy of credit expansion in A. Open-market purchases and a lowering of the discount rate by the Central Bank will inaugurate an expansion of loans and deposits by the commercial banks. As business concerns, with these new funds, increase their output, the national income will rise, while at the same time its distribution among the various income groups will alter in favor, probably, of recipients of wages and profits. Of the increasing national income, doubtless some additional portion will be spent on imports. Thus the trade balance is affected directly.

At the same time, the increased volume of production will run up against higher unit costs, if only for the reason that the unemployed factors which are now put to work are less efficient than those already employed. Since demand is improving, higher costs will entail higher prices, at least for domestic commodities. The rise of export prices, on the

¹ Some of these complicating circumstances are analysed in the appendix to this chapter. It should also be noted that in this case, as in all the preceding ones, a complete account should consider the reactions of changes in the rate of exchange not only upon merchandise exports and imports but also upon all the other items in the balance of payments, such as tourists' expenditures, services, etc. The general nature of the repercussions would, however, be the same on other debit and credit items as on exports and imports. For this reason simplified illustrations have been used throughout.

other hand, will be checked by the necessity of selling in a foreign market where incomes and demands have not increased. This checking effect will be greater, the more important is the foreign market relative to the domestic market for export products and the more elastic are foreign demands. Thus a second direct influence is brought to bear upon the trade balance. Exports tend to diminish. A similar effect may be brought about indirectly, through changes in relative factor prices, though this is unlikely to be of much importance in the short run.

Larger expenditure on imports will increase the demand for foreign exchange, while the decline in exports (a decline in total value, on the probable assumption that foreign demands are elastic) will bring a diminution in the supply. The rate of exchange will rise against A. This very movement of the exchange rate, however, sets in motion self-limiting forces. By lowering the cost of A's exports abroad, it offsets the price-raising tendencies of inflation, thereby partially restoring her competitive position. By raising the cost of A's imports, it forces a reduction in her purchases. A new equilibrium rate will finally be established at a level depending, as in the earlier illustrations, upon the relative elasticities of the reciprocal international demands and upon changes in the structure of prices in both A and B.¹

If we continue the assumption that no movement of short-term capital and therefore no transfer of purchasing power can take place, monetary expansion in A will have no tendency to spread to other countries (B). The increase in A's demand for B's exports, which in itself might tend to lead to a general rise in the level of business activity and income, will be offset by the effects of the rise in the rate of exchange on B. For whatever the immediate increase in A's expenditures on B goods, the rate of exchange must rise sufficiently to maintain equality in the two sides of the balance of payments.

¹ If the improved business conditions in A lead to the import of capital (principally entrepreneur's capital seeking investment in stocks), the additional supply of exchange thereby provided will serve still further to check the advance of the exchange rate.

APPENDIX

CERTAIN CONDITIONING ELEMENTS IN THE MECHANISM OF ADJUSTMENT

In the analysis in the body of this chapter, it was necessary, partly to conserve space, partly to make the exposition less involved and more intelligible, to indulge in considerable oversimplification. In order to provide a more accurate account of the processes of adjustment, this appendix is written. It attempts to show the part played by some of the conditioning elements to which only brief reference has so far been made: namely, varying elasticities of demand and supply and the relative importance to export industries of the domestic and the foreign market. For this purpose, we need consider in detail only one type of disturbance, an international capital movement. The argument may be applied by the reader, with whatever changes are necessary, to other varieties of disruption of balance-of-payments equilibrium.

In the analysis already presented of the adjustment to a large and continuing international capital movement, it was said that the foreign prices of the borrowing country's exports would rise and the domestic prices of its imports would fall. In reality, although this is undeniably the tendency, the situation is by no means so simple. The price changes that occur will depend upon a number of factors, of which the elasticity of demand and supply for each commodity, both at home and abroad, the relative importance of the country in question as a market and as a source of supply, and the relative importance to that country's export industries of the domestic and of the foreign markets, are the most significant.

Suppose, for example, to make the argument more concrete, that all countries are on an independent-paper-currency basis and that the United States begins a prolonged period of lending considerable sums each year to Mexico. We may suppose the peso price of the dollar to fall from 3 to 2.50.¹ It would seem that the prices of Mexico's exports to Americans and others would rise some 21% (in dollars, etc.), the peso prices of Mexico's imports fall approximately 17%. But so far as Mexico is only one of a number of sources of supply for any commodity, the foreign price of this article can rise only if the alternative supplies are very inelastic (*i.e.*, produced under conditions of rapidly increasing cost) or if the demand of Mexican consumers is both very elastic and sufficiently large

¹ This is the same as a rise in the dollar price of the peso from $33\frac{1}{2}$ to 40¢. Mexico's exchange rates on other countries will, because of arbitrage operations, move in the same direction to a similar degree.

relative to Mexican production to absorb her entire output at a modest reduction in the peso price. In the absence of either of these conditions, the foreign price (as, for example, of petroleum) will tend to remain constant, the peso price will fall and Mexican output and exports will tend to diminish. On the other hand, so far as concerns exports of which Mexico is the sole or principal supplier (*e.g.*, sisal, chicle), the foreign price *would* tend to rise, its increase depending principally upon the elasticity of foreign and home demands and upon their relative importance. An inelastic foreign demand together with a large and elastic home demand would be most favorable to an increase in the foreign price. Without this distinctly unusual combination, the price of such articles would rise by a percentage smaller than the increase in the foreign value of the peso.

With respect to imports, the prices of all commodities for which Mexico is a minor outlet would tend to fall (in terms of pesos) by a percentage equivalent to the reduction in the value of foreign currencies. Suppliers would continue to maintain the same price in the major markets (*e.g.*, in dollars), with the result that Mexico could now buy these products for a smaller outlay in her own currency. For articles for which Mexico furnishes an important market, the situation is more complex. If Mexican demand is very elastic, so that a constant foreign price (lower Mexican price) would mean greatly enlarged sales, while foreign supplies are inelastic, the foreign price will tend to rise, which means that any fall in the peso price will be less than the decline in the foreign exchanges.¹

Let us now summarise as briefly as possible the results of the foregoing discussion. We can say that under paper currency conditions, the exports of a borrowing country will tend to decline in volume, either because their foreign prices rise, or, if this price increase is less than the rise in the exchange value of the country's

¹ This analysis applies, *mutatis mutandis*, to a decline in the foreign value of a country's currency. It is particularly relevant to the fall in the international value of the dollar in 1933. While the dollar price level of both exports and imports rose, as was to be expected, the rise, between February, 1933, and February, 1934, was much less than the rise in the foreign exchanges. (Rise in index of exchange rates, 46%; rise in export-price index, 35%; rise in import-price index, 31%.) The importance of this country as a market moderated the increase in the dollar prices of imports, while the predominance of the domestic market for many of our exporting industries put a restraint on increases in the prices of their products. The situation was, of course, complicated by the recovery and agricultural program in this country and by events abroad. For a fuller discussion, see my article, "Export, Import, and Domestic Prices in the United States, 1931-1936," *Review of Economic Statistics*, November, 1937.

currency, because their production becomes less profitable. The volume of its imports will tend to increase because of a tendency of their prices, in domestic currency, to fall. Both export and import-competing industries will tend to contract, domestic industries to expand, the latter drawing mobile factors to them from the other lines. The demand for domestic products and services is provided by the proceeds of the loan, as the bills of exchange to which it gives rise are sold on the foreign-exchange market. There need be no change in the total income of the community, though a shift in the distribution of this income among industrial groups would appear inevitable.

PART II
POLICY

CHAPTER I

INTRODUCTION

WE have now completed our survey of the main principles of international trade, including under that head the mechanism of adjustment to various types of disturbance in the balance of payments. While that survey by no means covers the field exhaustively, this was not its object. Its primary purpose was to provide the essential theoretical foundation necessary for an understanding of international economic relations and for an evaluation of national policies affecting those relations. As the preceding part of this book has been devoted to acquiring the basis for understanding, so the remainder will be in large part concerned with the application of that knowledge to the problems of national policy in international economic affairs.

By a national policy in the sphere of international economic relations is meant a course of action by a government directed toward influencing the movement of goods, services, or factors of production, or aimed at offsetting the effects of such movements. In the field of international trade in goods, two broad alternative policies have traditionally been opposed to one another: namely, free trade and protection.¹ This opposition continues to provide one of the principal fields of conflict over international economic policy in many countries, notably the English-speaking nations, the Netherlands, and the Scandinavian countries, while historically it has

¹ The advocates of free trade and of protection are not, of course, to be grouped into two sharply separated poles of opinion. Rather there are various gradations of opinion, ranging all the way from the ardent free trader at one pole through those who sponsor protection for limited purposes to the rabid advocate of national self-sufficiency at the other pole.

furnished a perennial topic of debate. Therefore it is essential that we consider in some detail the case for free trade and the case for protection.

Increasingly in recent years, however, a rapid growth of state intervention in a large number of countries¹ has pushed the issue of free trade *versus* protection to one side. Instead, it has been taken for granted, and in the totalitarian countries, expressly stated, that it is the function of the state to prescribe the limits of trade, the methods of trade, and even the parties to trade. Where authoritarian governments rule, it is no longer a question of freer or more restricted trade, but of the right to trade at all. To justify this type of policy, the doctrine of autarky, or national self-sufficiency, has been promulgated. Although in its essentials this doctrine is merely a particularly virulent form of protectionism, its relations to various non-economic forms of nationalism and its rapid spread in recent years warrant us in giving it separate consideration.

For a thorough understanding of what may be called the liberal, the restrictive, and the interventionist policies in the field of trade, some knowledge of the technique of enforcing these policies is necessary. Therefore several chapters are devoted to a study of tariffs, various forms of indirect protection, commercial treaties, and the more recent forms of restriction and intervention, such as import quotas, exchange control, and clearing agreements.²

Just as governments may follow a course of freedom or of intervention with respect to the international movement of goods, so likewise with regard to services and factor movements. Shipping, insurance, and banking may be left to develop on their own, or their growth may be guided or

¹ Notably Germany, Italy, Russia, Poland, Turkey, and most of the nations of southeastern Europe.

² The policy of free trade implies, in general, a passive course of action, *i.e.*, abstaining from interference with the movement of trade. To establish freer trade in a world full of barriers, however, requires positive action. This is well exemplified in the Trade Agreements program of the United States government, to which a section of the text is devoted.

stimulated. Shipping subsidies, mail contracts, discriminatory port duties, and the regulation of coastal shipping are called to mind as examples of concrete measures in this field. The international flow of labor is nowadays almost universally subjected to drastic restrictions by means of immigration (and in some countries, of emigration) laws. Capital exports, and in a few instances even capital imports, have been subjected to close control.

For a complete survey of international economic policy, its applications to services and to movements of labor and capital should be studied. Since, however, the rationale of restrictions in these fields is very similar to the justification of protection or intervention with respect to trade, we undertake no separate examination of the case for or against barriers to immigration or to the movements of capital. Nor was it thought justifiable to devote to these topics the amount of space that would be necessary to provide an adequate descriptive account of historical movements of labor or capital. For the latter in particular there is ample literature for the interested reader.¹

It is quite otherwise with another important phase of national action affecting international economic transactions: namely, monetary policy. This is no place, of course, to undertake a detailed study of this intricate and difficult subject. To ignore it altogether, however, would be to overlook entirely one of the most important aspects of international economic problems. For national monetary policy, especially in recent years, has exercised a profound influence upon the course not only of trade but also of capital movements. Therefore an attempt will be made to assay the external effects of certain types of monetary policy and to arrive at a judgment with regard to their relative merits. In particular the problems of an international monetary

¹ Especially worthy of note are the following works: Hobson, C. K., *The Migration of British Capital*; Feis, Herbert, *Europe: The World's Banker, 1870-1914*; Southard, F. A., *American Industry in Europe*. For an interesting discussion of population movements, with especial reference to Japan, see E. F. Penrose, *Population Theories and Their Application*.

standard as opposed to independent managed currencies will be explored.

Besides free trade, protection, and monetary policy, there are many other courses of national action which have important repercussions upon the outside economic world. Among these we may mention the control of raw materials, various schemes of price control (*e.g.*, the Stevenson rubber restriction plan, the Brazilian coffee valorization experiment), cooperation with the economic work of the League of Nations, the cartel policy of governments, neutrality policy in time of war, and the "imperialistic" expansion of the dominant powers. These forms of national policy, however, are mostly either of a very specialised sort or are more closely related to the field of government than to that of economics. They warrant either broader treatment or more intensive inquiry than it is the function of this book to provide. For this reason they are largely excluded from consideration in these pages.

Aside from a formulation of the rationale of the more important international economic policies, together with a description of the technical measures of enforcing them, an evaluation of these policies in the light of economic principles must somehow be provided. Can the study of economics furnish such an evaluation? So far as the economist confines himself to the rôle of scientist, he is debarred from making value judgments. For the tasks of science are the marshalling and ordering of facts, and the discovery of significant relationships between, of basic principles underlying those facts. Must it not therefore be left to the social philosopher, whose primary function as a student of social ethics is to formulate the ends of social conduct and to criticise rival proposals?

If we were to attempt to judge the validity of the ends or objectives of economic policy (*e.g.*, of protection), we could only agree that in doing so we should be obliged to take on the rôle of social philosopher or statesman. For economic theory is concerned with the use of scarce means to attain given ends, not with ends themselves as such. Human ends are taken by the economist as part of his data, as is likewise the technique

of production at any time. He properly devotes himself, as economist, to answering the question "what is?" and not at all to answering the question "what ought to be?"¹

Is the economist, therefore, excluded entirely from judging of the merits of rival economic policies? By no means. For, given the ends of human conduct, there are various means of attaining them. So far as these means are economic, it is entirely within the competence of the economist to render judgment as to their relative merits. If the ends of national policy be clearly stated, the science of economics provides the necessary basis for answering several pertinent questions. Thus it enables us to tell (1) whether given ends can be achieved by the economic means provided, (2) which of several means is likely to prove the most effective, and (3) whether the attainment of two or more ends involves means which are incompatible with one another. The provision of the answers to such questions, while based on the analysis of Pure Economics or Economic Theory, is generally regarded as a separate branch of the subject. This branch, Applied Economics, will be one of our major concerns in the pages that follow.

A word as to the nature of the social ends which economics must accept as given is now in order. The most generally accepted goal of the economic policies of nations is economic welfare, which, if the distribution of income is provisionally ignored, may be interpreted to mean the maximisation of the national income of goods and services. Since the immediate object of economic activity is the production of wealth, for the ultimate purpose of satisfying human wants, and since this ultimate purpose will be most effectively promoted by maximisation of national income, it seems reasonable to accept this as the primary goal of policy. In what follows, then, it will be assumed that the maximisation of the national income is the desired objective. Where, however, a particu-

¹ For a fuller discussion of the scope of economics and the relation of the subject to ethics, see Lionel Robbins, *The Nature and Significance of Economic Science*, Chapters I, II, and VI; J. N. Keynes, *The Scope and Method of Political Economy*, Chapters I and II.

lar policy has been urged as promoting some other end, such as military preparedness, we must, as economists, take this end as given. It will be within our province only to indicate the effectiveness of the policy as a means of reaching the prescribed goal and to point out the costs involved.¹

¹ It may be noted that to call attention to costs is merely one way of saying that the goal in question conflicts to that degree with the wider goal of maximum national income.

CHAPTER II

THE CASE FOR FREE TRADE

THE case for free trade rests upon the inherent advantages of specialisation. Everyone in the least acquainted with the subject matter of economics is familiar with these advantages, so we need merely state them briefly. They are: (1) the acquisition of skill, (2) the allocation of work in accordance with the capacities of the human and material resources available, (3) the saving of time, and (4) the facilitation of the invention and use of machinery. Because of these advantages, which are, indeed, merely different sources of increased output, specialisation brings great economy in the use of productive resources. With a given quantity of labor and natural resources, the income of a community will be much greater if each of its members specialises in an occupation than if all perform in turn the manifold tasks necessary to the satisfaction of their wants. Not only will labor be made more efficient by the time thus saved, the skills acquired, and the adaptation of jobs to men, but similar benefits will also accompany the utilisation of non-human resources. For both land and capital will, so far as conditions permit, be used to perform only those tasks for which they are best suited, while this use will be more intensive. Moreover, the fourth aforementioned advantage of specialisation, the facilitation of invention, will ensure not only that the forms of capital will be most effectively adapted to their requirements, but also that the quantity of capital or aids to labor will be more abundant. Thus it becomes apparent that the most widely accepted end of economic activity, the maximisation of income, is greatly furthered by specialisation.

But specialisation within a given community is limited in scope. While a considerable degree thereof may be achieved, it cannot be carried to its fullest extent in a single locality. For complete realisation of the benefits of specialisation, it must be not merely local but interregional in character. Only when regional or geographic specialisation is permitted can the differing resources of various localities be most fully adapted to their tasks and utilised most intensively.

Just as specialisation within a single region necessitates an exchange of goods and services between the numerous specialised producers, so likewise must territorial specialisation be accompanied by interregional and international trade. Therefore, since the income of any community or nation is large just in proportion to the extent to which it specialises, the greatest possible freedom of trade is justified.

These are the simple essentials of the case for free trade. It may with advantage, however, be formulated in terms of costs and prices, and with special reference to international trade. We have seen that a basis for international trade exists when relative prices differ in different countries. With this condition present, and with national price systems related through the foreign exchanges, trade will take place in those commodities which each country can produce at the lowest money cost.

The immediate and obvious gain from trade consists in the purchase of an article for a smaller money outlay than would have been necessary had it been produced at home. The fundamental nature of the gain, however, is to be found in the larger real income of goods and services. If we choose to make at home an article which can only be produced at a higher cost than abroad, we must devote to the production of a given quantity of that commodity a more valuable collection of productive agents than would be necessary if we used those agents to produce exports and with these acquired the same product at the lower foreign price. By trading we are thus enabled to free some portion of our productive resources for the satisfaction of other wants. As a result our national income is larger by whatever these released resources produce.

By way of illustration, let us assume that it costs \$3 a yard to produce woollen cloth in the United States, \$2 in England. To acquire a million yards of cloth, three million dollars' worth of scarce and valuable agents will be required if it is made here, but only two million dollars' worth (devoted to the production of exports) if we buy abroad.¹ Under free trade, we would make our purchases in the cheapest market. The result in this instance would be that a million dollars' worth of productive agents would be freed to enlarge our income in the production of other commodities.

It is of some interest to note that the argument for free trade just presented is essentially the same as that advanced by Adam Smith over a century and a half ago. This great opponent of Mercantilism then said:

What is prudence in the conduct of every private family can scarce be folly in that of a great kingdom. If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy it of them with some part of the produce of our own industry employed in a way in which we have some advantage. The general industry of the country, being always in proportion to the capital which employs it, will not thereby be diminished, . . . but only left to find out the way in which it can be employed with the greatest advantage. It is certainly not employed to the greatest advantage when it is thus directed towards an object which it can buy cheaper than it can make. The value of its annual produce is certainly more or less diminished when it is thus turned away from producing commodities evidently of more value than the commodity which it is directed to produce. According to the supposition, that commodity could be purchased from foreign countries cheaper than it can be made at home. It could therefore have been purchased with a part only of the commodities, or, what is the same thing, with a part only of the price of the commodities, which the industry employed by an equal capital would have produced at home, had it been left to follow its natural course.²

In addition to the principal benefit of free trade — the enhancement of real income — there are certain incidental

¹ To be strictly accurate, the illustration should be confined to the marginal increment, since the relative costs of producing earlier units may be quite different.

² Adam Smith, *Wealth of Nations*, I, p. 401 (Everyman's edition).

advantages as well. One of the most important of these is the tendency toward the improvement of industrial technique that results from the enlargement of the area of competition. It is generally agreed that, except in naturally monopolistic industries, competition is a stimulant of progress and improvement. International competition is no exception to the rule. Moreover, a second incidental advantage of free trade derives from this competition: the establishment of a monopoly is made that much more difficult.

Both the primary and the collateral benefits of free trade are similar to the effects of a cheapening of the means of transport and communication, which permits us to take fuller advantage of the possibilities of geographical specialisation. An interesting commentary on the situation, showing that the effects of free trade are ill understood, is to be found in the fact that the improvements in the nineteenth century in transportation and communication, which continually lowered the costs of acquiring want-satisfying goods and thereby raised our standards of living, were accompanied during much of this period by a simultaneous heightening of our tariff barriers. It was as if we perversely chose to deny ourselves the fruits of our expanding railways, our improving shipping, and our spreading telephones and telegraphs. Yet in spite of rising tariffs, these improvements together with the increasing demands of growing communities and the continuing and ever-changing international cost differences resulted in a mounting flow of goods between nations, mute but convincing evidence of the fact that trade is beneficial.

Indeed, if the objective of the maximisation of national income be accepted, the basic argument for free trade is irrefutable, since a policy of free trade is an undeniably effective means of promoting that end. As long as the opponents of freedom admit the importance of economic welfare, in the sense of the level of income, they cannot successfully attack the free trade argument directly: for to such direct attacks it is invulnerable. To establish a rational case for intervention or protection, they have two alternatives.

On the one hand, they may show that the undeniable gain of free trade will be more than offset in other directions; that it carries with it, in addition to advantages supplementary to the main one, supplementary disadvantages which are more than sufficient to offset all the gains. On the other hand, while admitting the importance of raising the national income, they may postulate other ends equally or more important, and attempt to prove that protection is an effective means of furthering these rival ends.

We shall consider both these types of argument. With respect to the first, our judgment must rest upon an analysis of the reality of the supposed offsetting disadvantages and upon a weighing of the real disadvantages against the advantages. With respect to the second kind of argument, while we cannot as economists challenge the validity of other ends than economic welfare, we can examine the efficacy of the proposed means of achieving these rival goals and point out the cost, in terms of income foregone, of pursuing them.

SUGGESTED REFERENCES

Beveridge, Sir William, *Tariffs: The Case Examined* (Longmans, Green & Co., New York, 1931), Chapter II.

Haberler, Gottfried von, *The Theory of International Trade*, Chapter XIV.

Taussig, F. W., *Free Trade, the Tariff, and Reciprocity* (The Macmillan Co., New York, 1920).

Viner, Jacob, "The Doctrine of Comparative Costs," *Weltwirtschaftliches Archiv*, Vol. 36 (1932).

Viner, Jacob, *Studies in the Theory of International Trade*, Chapters VIII and IX.

APPENDIX

REAL VERSUS MONEY COSTS AS A BASIS FOR THE CASE FOR FREE TRADE

There is, it must be admitted, some difference of opinion among economists with respect to the foregoing defense of free trade. This disagreement relates, not to the reality of the advantages of a free-trade policy, but to the formal requirements of a proof of those

advantages. Thus it has been urged that to reach a clear-cut decision as to the merits of free trade as compared with protection, it is not enough to show that real income would be larger under the former than under the latter policy. The relative real cost of obtaining income under each policy must also be considered. The issue has been clearly stated by Professor Viner: "It is necessary to show the comparative returns of income per unit of outgo under the two policies, and those units of outgo must be measured in terms having real value significance."¹

The basic soundness of this position is not to be gainsaid. There is no question that, even though the income obtainable under free trade can be shown to be larger than that obtainable under protection, nonetheless the latter policy may be preferable if it cannot also be shown that the larger income is not procured at a disproportionately greater cost in terms of disutility. The attempt to utilise a comparison of real costs as well as a comparison of results in terms of real income in support of a policy of free trade meets, however, the same logical difficulties as are encountered by the attempt to explain international prices by real costs. For a quantitative measure of costs is necessary if we are to make an intelligible comparison, and the only quantitatively measurable costs are money costs. Unless we can make the classical assumption that money costs correspond rather closely to real costs, a demonstration of the benefits of free trade must be sought along other lines.

Now with respect to any possible correspondence of real and money costs, two points may be made. First, the immobility of labor as between certain non-competing groups established a strong presumption that wages in the higher-paid occupations do not reflect a disutility of labor greater than exists in the lower-paid groups. (If anything, the disutility in many highly-paid occupations is less than in those where the pay is lower.) This means that even if wages were the sole element in money costs, the prices of commodities produced by different kinds of labor could not be said to indicate relative real costs. Second, since the disutility of labor and the disutility connected with saving are presumably different in kind, and since no bridge can be built between the two, it is impossible to add together wage and interest elements of money cost and say they represent a certain total of real costs. This difficulty could only be avoided if we could assume labor and capital combined in constant proportions. We know, however, that these proportions vary considerably from industry to industry.

¹ Viner, Jacob, "The Doctrine of Comparative Costs," *Weltwirtschaftliches Archiv*, Vol. 36 (1932), p. 401.

What we are actually confronted with, in attempting to decide as to the merits of free trade and protection, is the possibility of using a certain collection of valuable resources to produce a certain quantity of a given commodity (A) at home or of using those resources to produce A indirectly, by first producing exports. We know that if direct domestic production involves higher money costs than obtain abroad (*i.e.*, if the industry requires protection), we can procure the same quantity of A through importation by the use of a smaller collection of valuable resources than would be required under protection, thereby releasing some portion of our resources for the production of additional real income (B). We do not know, and have no means of knowing, whether the outgo (in terms of real cost) required to produce A under protection is greater or less than the outgo required to produce A plus B under free trade. The value of the real resources used in each case is the same, though their composition, owing to the fact of variable proportions, will probably differ.

This is a situation frequently encountered in real life. We are often called upon to reach decisions on the basis of limited evidence. Various relevant and important factors may be involved, about which we can obtain no reliable information. When this is the case, the normal and intelligent procedure is to act upon the evidence we do possess, treating those matters about which we lack information as irrelevant to our determination of policy — as indeed they are. A similar procedure would appear to be justified in judging as to the merits of free trade and protection. To reach a conclusive decision, completely satisfying from the standpoint of logic, we would need to know the real costs of each policy, as well as the real income realised. But we do not and cannot know whether a given number of dollars' worth of unskilled labor does or does not represent the same real cost or disutility as an equal number of dollars' worth of skilled labor or of the services of capital. Therefore it is impossible to compare the real costs in an industry fostered by protection with the presumably different constellation of real costs in the industries (export and alternative-product industries) which would exist under a policy of free trade.¹

¹ It may be noted that since land is a productive agent of non-human origin, there is no real cost connected with its employment. Nonetheless the fact that its use for one purpose precludes its use for another purpose means that the employment of land does involve an opportunity cost, *i.e.*, that land utilisation costs something in terms of alternative products foregone. So far as resources used in the free-trade-protection illustration consist of land, the alternative-product or gains-in-real-income approach is the only one capable of including land costs as an integral part of the analysis. The comparative cost justification of free trade is forced to take land into account as a dangling addition to the main case.

Since it is impossible to procure any quantitative evidence as to the relative magnitude of real costs under the alternative policies being considered, we are obliged, as in other similar situations, to treat real costs as a matter of indifference and to decide the issue on the basis of the available evidence on the side of income. It is still true that real costs may be significant to those who incur them, and they probably influence — in a quantitatively indeterminate way, through influencing the scarcity of the factors — money costs. But since the policy decision in question must rest on quantitative comparisons, for this decision unmeasurable real costs are of no significance.

Inasmuch as not all the evidence required for an absolutely conclusive judgment is obtainable, the judgment in favor of free trade must be regarded as probable only, though one having a very high degree of probability. Moreover, since no inquiry is capable of showing that real costs are higher under free trade than under protection or *vice versa*, and since all the measurable evidence is positively on the side of free trade, we have as much reason as is frequently provided in human affairs for accepting a verdict in favor of that policy.

CHAPTER III

THE NATURE AND EFFECTS OF TARIFFS

THE NATURE OF TARIFFS

A'TARIFF is a schedule of duties levied upon the importation of commodities into a given nation from abroad.' Such import duties, when they are effective, almost universally raise the prices in the taxing country of the goods upon which they are imposed. They may be levied for the purpose of revenue, as part of a general tax program, or for the purpose of protection, as a means of encouraging the domestic production of the article taxed.

✓ Clearly, every duty imposes a cost. In the case of revenue duties, it is, like any other tax, simply part of the cost of maintaining the government. In the case of protective duties (which are, of course, effective just to the extent to which they exclude imports) the cost takes the form of the higher price consumers pay for the protected article. There are, however, two exceptions to the rule that every duty involves a cost. One is when the tax is ineffective, that is, when no imports are excluded by reason of the duty. In general, import duties on commodities of which the country imposing the duty is an exporter are of this nature. The other exception, of negligible practical importance, is when the entire duty is paid by the foreign exporter. This situation can arise only when the duty-levying country completely dominates the other or, when the exporter has a monopoly and the new duty is less than the monopoly profit previously obtained.¹

Protective duties are in their very essence discriminatory. That is, each such duty picks out for special treatment the

¹ On the latter point see C. E. Griffin, *Principles of Foreign Trade*, p. 409.

industry whose products it protects.¹ Obviously, special treatment cannot be accorded everyone; hence any attempt to make protection universal would be self-defeating, for if *all* prices were raised by such means to a similar degree, every producer's relative position would be the same as before. Universal "protection" would require, of course, not only duties of identical proportionate weight on all imports, but also equivalent bounties on the products of all domestic and exporting industries. If the policy were limited to the imposition of duties upon all imports, there would be discrimination in favor of the import-competing industries.

DIRECT EFFECTS OF IMPORT DUTIES²

With the exception noted above, that duties imposed upon exported commodities are ineffective, it may be said that the direct effects of import duties depend upon cost conditions in the industry concerned. That is, their outcome will vary as the industry is one of constant, of increasing, or of decreasing costs. In what follows, we shall assume the absence of costs of transport, which in practice are tantamount to a duty of equivalent weight. We shall also assume the same type of cost conditions (constant, increasing, decreasing) to prevail in both the countries compared, an assumption which might occasionally not correspond with the facts.³

(a) *Constant Costs.* — If the country imposing the duty has been importing the product, it must have been importing its entire consumption, since under constant costs, foreign

¹ The discriminatory nature of protection is made even clearer if one remembers that a protective import duty is essentially similar in its effects, so far as the producers of the protected commodity are concerned, to a bounty. In the one case, producers are enabled to charge consumers a higher price for their wares; in the other, their income is enlarged by a direct payment from the government.

² In this and the following section, I am heavily indebted to Haberler's discussion of the subject (*The Theory of International Trade*, Chapters XI, XII, XV). His analysis of the case of increasing costs is closely followed, and while he does not consider decreasing costs, his excellent reasons for not doing so are reproduced.

³ The reasoning presented in these pages could readily be extended to fit any pair of combinations of different cost conditions desired.

costs would have been below domestic costs for any volume of output. If the duty is less than the difference in costs, imports will be reduced, production abroad will decline, and the price of the commodity will be raised by the full amount of the duty. If, on the other hand, the duty is equal to or greater than the difference in costs, imports will be entirely excluded and the price will rise by the difference between foreign and domestic costs.

(b) *Increasing Costs.* — A duty on a commodity produced at increasing cost will, unless prohibitive of imports altogether, lead to a difference between the domestic and the foreign price equal to the duty. If the difference is more, further importation will be profitable; the flow of imports will bring down the domestic price. If the difference is less, imports will be sold at a loss; the consequent reduction in their volume will permit the domestic price to rise.

To say that after the imposition of the duty the domestic and the foreign price will differ by the amount of the tax by no means implies, however, that the price of the protected commodity in the importing country (domestic price) will rise by the amount of the duty. Under the assumed conditions of increasing costs, price and cost in the importing country (I) will rise as output expands; in the exporting country (E) they will fall as output contracts. When adjustment to a newly-imposed duty has been achieved, the price of the protected commodity in I will have risen by as much *less* than the duty as the price in E has fallen.

A diagrammatic representation of the situation may serve to make the nature of the adjustment clear. The figure on the next page shows the conditions of supply and demand of a given commodity in two countries between which unrestricted trade in that article is assumed to exist. The right side of the diagram relates to the exporting country, with the horizontal scale of quantity produced reading from 0 to the right. The left side relates to the importing country, with the horizontal scale of quantity produced reading from 0 to the left. The vertical price scale is common to both parts of the

figure. In the absence of trade between the two countries, the price in I would be P_i , quantity produced or supply, q_i , while in E price would be P_e , supply q_e . With the opening of trade, output in E, the country with the lower costs, would expand, with cost gradually increasing. In I the competition of imports would force a contraction of output, with cost gradually declining. Equilibrium would be established at a price P common to both countries (ignoring transport costs), with the total demand in I (d_i) satisfied partly by domestic

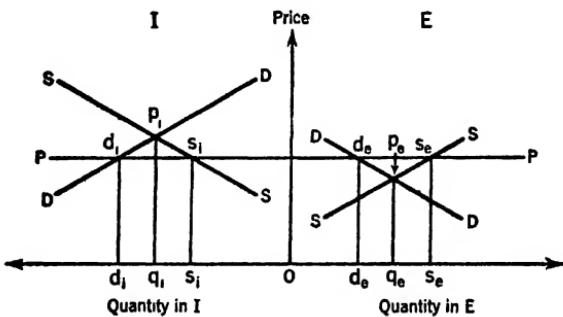


FIGURE I

production (represented by the distance Os_i on the horizontal scale), partly by imports ($s_i d_i$). Total output in E would be Os_e , of which Od_e would go to domestic consumers, while $d_s e$ would be exported. Costs of marginal producers would be equal in both countries at P . (In this diagram, as in all relating to similar conditions, the P line must be so drawn that the portion of it included between the demand and supply curves in E is equal to the portion included between the comparable curves in I.)

Now let us consider the changes introduced by the imposition of an import duty in I. A prohibitive tariff, that is, a duty equal to or greater than the vertical distance between P_i and P_e , would simply bring about a reversion to the situation that existed before the opening of trade. A duty of less than that amount would work in the same direction but to a lesser degree. Since such a duty would appear to producers in E as a diminution of foreign demand, or alterna-

tively, as a reduction in the price obtainable in I by the amount of the duty, its effects may be shown by lowering the entire I-section of the diagram by that sum. (See Figure II.) Thus in I the new curves $S'S'$ and $D'D'$ replace SS and DD at a level lower by T , the amount of the duty.

A new equilibrium will be established at a price P' such that the section of the price line $P'P'$ lying between the E curves ($d_e's_e$, — exports from E) is equal to the section of it

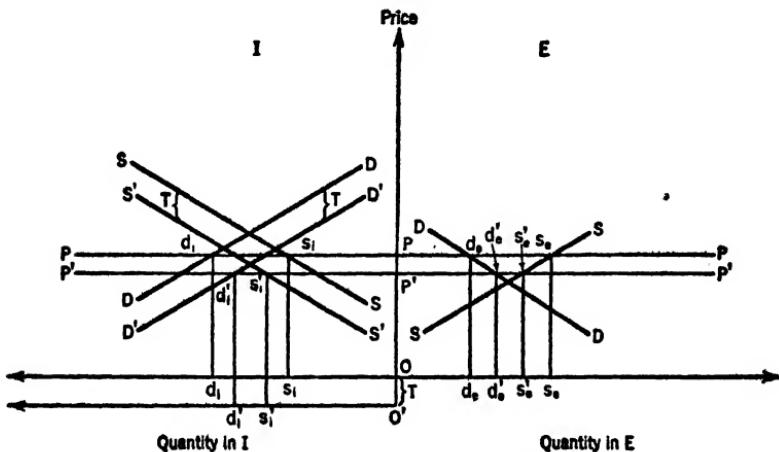


FIGURE II

lying between the I curves ($d_i's_i$, — imports into I). The price in E will thus fall from P to P' , a new lower marginal cost, while the price in I will rise by the amount of the duty T less the reduction in costs, PP' . (The price in I must now be measured from the lower horizontal axis starting at O' .) In E, output contracts from O_{s_e} to O_{s_e}' , with, of course, a lowering of marginal costs from P to P' . Exports shrink from $d_e s_e$ to $d_e' s_e'$, while domestic consumption expands from $O d_e$ to $O d_e'$. In I, the new higher price $O'P'$ permits an expansion of output from $O s_i$ to $O' s_i'$, while total consumption (home production plus imports) declines from $O d_i$ to $O' d_i'$.

Obviously this method has its shortcomings, since it relates to only one commodity at a time and requires the assumption

that all other things remain unchanged. It is, however, a useful method for analysing the effects of a particular duty if we can ignore the indirect effects, *i.e.*, changes in the balance of payments, in the monetary situation, and consequent possible shifts in the demand and supply of other commodities. Often these changes are relatively unimportant, in which case the foregoing analysis will be substantially correct. When they cannot be ignored, this method will give us only a rough first approximation to a solution. A full answer would require an impossibly complex tracing of a long and intricate series of reactions. Even in such a situation, however, the first approximation might be substantially corrected by taking into account the more important and obvious of the indirect effects of the duty.

The foregoing discussion shows the *nature* of the direct consequences of the imposition of a duty. Attention may now be called to certain factors which determine the *degree* of price change to be expected. The rise in price in I will vary directly and the fall in price in E inversely with the volume and elasticity of supply in the exporting country (E).¹ Great elasticity of supply in E (*i.e.*, slow rise in costs as output is increased) means a rapid contraction of output as the price received for exports falls. Thus I will be forced to produce more of her requirements at home, and at higher costs, than if E restricted her output but little (*i.e.*, had an inelastic supply). This very elasticity of E's supply will therefore necessitate but a relatively small decline in her price.

On the other hand, the rise in price in I will vary inversely and the fall in price in E directly with the volume and elasticity of home supply in the importing country (I). For an elastic supply there means that efforts to increase domestic

¹ That the volume or absolute amount both of supply and of demand is relevant may be briefly made clear. It is the slope or inclination of the curves which determine how much, for example, costs will rise in the importing country as a result of the imposition of a duty. And the slope is determined by both the elasticity and the amount of the demand or supply. A larger supply (or demand) will have a more gradual slope than a smaller one with the *same* elasticity. See Haberler, *op. cit.*, p. 229, n.



output in meeting the demand of the protected market will meet with only slowly rising costs. So far as E is concerned, she will be more rapidly replaced in her export market by protected competitors, and thus will be forced to contract output more (retire to a lower cost margin) than if output in I could only be increased at rapidly rising costs.

Similarly, the degree of price change will in part be determined by the nature of the demand schedules in both countries. The larger and more elastic is demand in the importing country, the less will the price rise there and the more will it fall in the exporting country. For with an elastic demand, the quantity taken falls off rapidly as price rises. This means that in the face of a tariff-induced price rise, the total quantity both of imports and of domestic production required will contract sharply. Domestic output will expand but little, with only a moderate increase of costs, while production in E will shrink considerably, with equilibrium being established at a lower level of marginal costs than if I's demand were inelastic.

On the other hand, the larger and more elastic is demand in the exporting country, the less will the price fall there and the more will it rise in the importing country. For elasticity of demand in E means that, as the price falls, upon the contraction of output, the market partially lost in I will be rapidly replaced by the entry of new buyers at home. Total output will shrink less than it would under conditions of inelastic demand, but exports will shrink more. In I, a larger proportion of the total demand will have to be satisfied by means of domestic production at steadily increasing costs.

(c) *Decreasing Costs.* — On the assumption that decreasing costs are to be found in a competitive industry, it is clear that with trade free, the entire output of a commodity produced under such conditions of cost would come from that one of two trading countries whose level of costs was the lower. For if the equilibrium price in the absence of trade is lower in one country than in the other, not only will the opening of trade bring about a reduction of costs in the exporting country, but

also it will be impossible for producers in the importing country to compete in supplying any portion of the home demand. This can be clearly seen from the diagram below.

A duty (less than prohibitive) on a commodity produced under decreasing-cost conditions would raise its price in the importing country by as much more than the duty as costs were raised in the exporting country by the contraction of output. In the latter country, the price would rise by the increase in costs.¹

There is, however, a fundamental objection to this whole method of approach, for it rests upon the assumption of the continuance of competition. If decreasing costs, so far at

¹ Such a situation is illustrated by the following diagram:

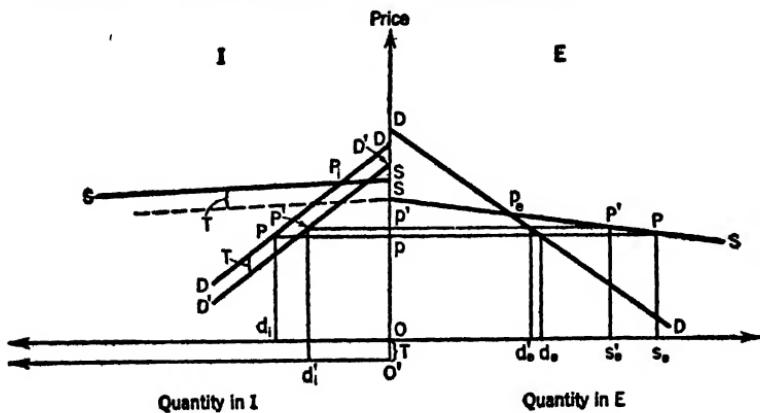


FIGURE III

In isolation, prices in the two countries would be P_e and P , respectively. With the opening of trade, equilibrium would be established at the price P , with imports into I of Od_I of course equal to exports from E (ds_E). The imposition in I of a duty of amount T would, by contracting the demand for E's exports, force her producers back to a higher cost level, P' , at which exports just matched I's effective demand for the commodity at this price. The price of the commodity thus rises in E by the increase in costs, PP' ; in I it rises by this sum plus the duty, or from OP to $O'P'$.

A further unrealistic assumption should also be indicated at this point. This is one implicit in the foregoing argument, that the curve of decreasing costs is reversible, *i.e.*, that a reduction of output will raise costs by as much as they are lowered by a corresponding expansion of output over the same portion of the curve. When the volume of production shrinks, it is highly unlikely that all of the economies, both internal and external, discovered at the larger output would be lost to producers. Hence with a decline of production, costs would rise less rapidly than they fell with the original expansion.

least, as they depend on the realisation of internal economies,¹ are inconsistent with the maintenance of competition, we would be confronted with a problem of monopoly price. And it seems highly probable that the existence of continuous decreasing costs (a steadily declining cost curve) under competitive conditions is an impossibility. For internal economies are economies of large-scale production, and if at any time an increase in the size of the plant will reduce costs, it may be assumed that competition will lead to the establishment of plants of this optimum size. It would be to the interest of every producer to act so as to bring about this result. Thus in any given industry, plants will tend to increase in size until no further economies are available, when the situation becomes one of increasing or constant cost, or until the individual firms become so large relative to the market that the assumptions of perfect competition no longer hold.

If internal economies be ruled out as a basis for steadily decreasing costs under competitive conditions, there remain for consideration those economies external to the individual plant, which cannot be forecast and thus cannot enter into the calculations of business men. A distinguishing characteristic of external economies is their vagueness and uncertainty. No

¹ Both internal and external economies, it will be recalled, arise in the course of an increase in the output of an entire industry. Internal economies represent the opportunity afforded of furthering the division of labor or the use of machinery, or of utilising more fully existing specialised workers and machinery, within each individual plant. External economies are, as the term implies, external to the individual plant. They are general developments that accompany expanding industry, such as an enlarged and more readily available supply of trained labor, or the establishment of a trade journal with its technical news and information, that tend to lower costs all round without any action on the part of the entrepreneurs in the industry itself.

Internal economies must, of course, be confined to the adoption of existing and proved machinery and techniques, to changes in the combination of the agents of production or in the allocation of tasks which could be predicted. They must exclude the introduction of new inventions and newly-devised techniques; such changes are not a cause of decreasing costs, but serve to lower by a definite amount any type of cost curve, be it increasing, decreasing, or constant. (On this point, see Garver and Hansen, *Principles of Economics*, pp. 237-246.) We may also note that each type of cost curve expresses a functional relationship between output and unit cost without regard to time. In other words, they represent not a history of costs and output but a technical connection between the two variables.

one can count on them beforehand, and, indeed, if they do turn up, they may, as Haberler suggests, be offset by diseconomies (congested freight routes or means of communication, higher prices for the means of production) or they may "benefit not only one individual industry, but many industries simultaneously or possibly manufacturing as a whole relative to agriculture."¹ Therefore it does not seem that they provide a sound or significant foundation for prediction, *i.e.*, for the extrapolation of the (decreasing) cost curve.

If the industry in the country imposing a duty were in the temporary stage of decreasing costs to which reference has been made, the analysis already suggested would be applicable. If, however, it had already attained the status of a monopoly, or were to do so under the stimulus of a duty, such a duty would create or strengthen the monopoly. Whether the price would be raised by the full amount of the duty would depend upon monopolistic considerations as to maximum net revenue.

INDIRECT EFFECTS OF IMPORT DUTIES

The imposition of an import duty is almost certain to affect indirectly the demands for other commodities, and therewith the volume of these goods produced and their prices. The nature of this indirect effect will depend upon the elasticity of the demand for the protected commodity. If the demand be highly elastic, the rise in price resulting from the duty will release purchasing power to be spent upon other goods; if inelastic, expenditure upon other products will be reduced. Only with an elasticity of demand of unity will the total expenditure upon other commodities remain unchanged; even so, its relative distribution among these goods may be altered. Also to be considered is the way in which the

¹ Haberler, *op. cit.*, p. 208. For a fuller discussion of internal and external economies from the point of view presented here, which closely follows that of Haberler, see his book, pp. 198-208. Also see the discussion by K. L. Anderson, "Tariff Protection and Increasing Returns" (*Explorations in Economics*, Chapter XV)

state spends the revenue received from imports subject to the duty.)

It is clear that if demand schedules in the duty-levying country are significantly changed, an alteration in the structure of production will be entailed. A similar result will also be brought about from a different direction. A reduction of imports means, in the long run, a reduction of exports. Factors of production will be released from the export industries and will tend to move into the protected industries and into industries which may have benefited from the changed demands of the consumers. To the extent to which the demand for factors differs in the latter as compared with the export industries, there will be some adjustment of factor prices. In the short-run transition period after the introduction (or raising) of a tariff, during which exports may temporarily continue at the old level, the excess in the supply of exchange will lead to a fall in the value of foreign currencies. Under the gold standard, this will tend to bring about gold imports or at least a relative expansion of credit in the protecting country, with consequent possible changes in the different categories of prices. Under paper-currency conditions, the exchange rate will simply fall sufficiently to restore price equilibrium with the rest of the world.

When the tariff is imposed on raw materials or instruments of production, the cost of exports embodying these materials or using these instruments will rise. A decline in the volume of exports will then be brought about directly, rather than in the indirect fashion following the imposition of duties on consumers' goods. This effect may be overcome by a drawback (a remission of the duty on raw materials, etc., used in the production of exports). Injury to an industry processing or finishing raw materials for domestic consumption may be offset by a compensating duty on the finished product. Thus manufacturers of woollen textiles whose raw material is subject to a protective duty will have their position relative to foreign competitors equalised if duties equivalent to those on the raw material are imposed on the imported finished fabrics.

SUGGESTED REFERENCES

Haberler, Gottfried von, *The Theory of International Trade*, pp. 170-173; 198-208, Chapter XV.

Taussig, F. W., *Some Aspects of the Tariff Question*, Chapter I.

Beveridge, Sir William, *Tariffs: The Case Examined*, Chapter IV.

Graham, Frank D., *Protective Tariffs*, Chapter II.

Anderson, Karl L., "Tariff Protection and Increasing Returns" (Chapter XV of Part I, *Explorations in Economics*).

Marshall, Alfred, *Money Credit & Commerce*, Chapters IX-X.

CHAPTER IV

THE CASE FOR PROTECTION

BEFORE embarking upon a discussion of the arguments for protection, it will be well to consider briefly a point which many protectionists ignore. This is the relationship between exports and imports. When a country increases its restrictions upon the entry of goods from abroad, imports will decline. But is it certain that, as many writers hold, exports will fall off by an equivalent amount? There is, of course, no direct connection between any individual import and export, for example, between the purchase by an American of several cases of French wines and the sale abroad by some other American of an automobile. Each of these transactions is carried out without relation to the other; each brings into action the credit machinery of international trade, involving the purchase of or the sale to a bank of a bill of exchange.

If, however, our earlier analysis of the foreign exchanges and the balance of payments be recalled, it will be granted that a considerable change in the value of a country's total imports is very likely to produce a similar change in the value of its total exports. It will be remembered that the chief items in any balance of payments are goods, services, loans, interest and dividends, and gold, all of which may appear on both sides of the accounts. A large reduction in merchandise imports, by depriving foreigners of an important means of acquiring currency in the protectionist country, will leave a gap in the balance of payments which must in some way be filled. Now it is true that balance may be restored, not only by an equivalent reduction of exports, but also by a sufficient decline in any other credit item, as well as by a like increase in any of the debit items. For example, the reduced purchasing power of

the foreigners may cause them to buy fewer services from the restricting nation, or to lend it smaller sums if it has been borrowing abroad. If it has been shipping gold to balance its international accounts, it will now need to send less by the amount to which imports have diminished. Interest and dividends are unlikely to be directly affected, since they relate to pre-existing holdings of foreign securities. With respect to reduced borrowing, since the rate and direction of international capital movements depend primarily upon differences in interest rates, what happens will be determined by the credit policies of the nations concerned. *If* the protectionist country reduces discount rates, and/or *if* discount rates are raised in the countries whose exports suffer, any movement of capital into the former will *tend* to be lessened. Such a change is, however, by no means certain, particularly in view of the fact that nowadays central banks direct their activities primarily toward evoking stability of business conditions. Moreover, any reduction in borrowing is contingent upon the existence of borrowing by the protectionist country in the first place.

Look now at the possible changes in the debit side (payments due to foreigners) of the international accounts. A decrease in imports may be matched by an increase in any of the other items on this side. There is little likelihood that a restriction of imports will lead nationals of the country taking such action to purchase additional services (shipping, banking, insurance) from foreigners, since these services are closely related to the volume of goods movements. Nor are interest and dividends likely to be much affected. This leaves loans and gold for consideration. If the requisite changes in relative interest rates occur, the volume of foreign lending will tend to increase.¹ Finally, gold may move into the protecting country in settlement of the credit balance. Neither increased foreign lending nor inward gold movements can go on in-

¹ Indeed, the immediate effect of a restriction of imports is an increase of short-term foreign lending, in the form of larger bank balances in foreign centers. This will be the result if, as is probable, exports and the other credit items continue in unreduced volume, thereby creating a temporary excess in the supply of exchange over the current ordinary demands.

definitely, however, without provoking a counterbalancing movement of merchandise exports or imports. For soon or late the accumulation of interest charges will exceed current new loans, unless there is a cumulative expansion in the rate of lending, while the flow of gold is, for obvious reasons, essentially a temporary phenomenon. Moreover, as we know, the movement of gold tends to produce price and income changes which will lead to a decline of exports and an increase of imports.¹

A process of elimination thus leads to the conclusion that — in the absence of special circumstances — a tariff-induced reduction of imports will necessitate a roughly equal shrinkage of exports. Services, being rather closely related to goods movements, and interest and dividends, reflecting prior international lending, must be ruled out of both sides of the account as potentially important sources of adjustment changes. A significant decline in an outward gold flow or in foreign borrowing can take place only if gold or securities have previously been leaving the import-restricting country. Smaller capital imports, moreover, depend upon appropriate changes in relative interest rates. An increase in foreign lending requires this same condition, and is also, together with an inward gold movement, essentially a temporary stop-gap. Thus while the immediate effect of a restriction of imports need not be an equivalent reduction in the value of exports, in the long run this outcome is to be expected, unless there is a definite reason for anticipating that the necessary adjustment in the balance of payments will be brought about in another manner. In other words, the burden of proof rests upon those who assert that action which restricts the sales of foreigners will not equally restrict their purchases.

Let us now turn to the arguments advanced in support of protective tariffs. These may be grouped into two main

¹ The foregoing discussion applies to gold-standard conditions. If the country introducing the restrictions is on an inconvertible-paper-currency basis, its action will, by raising the foreign value of its currency, tend to cause a much more direct and immediate reduction of its exports.

divisions: those which rest upon popular fallacies and those which are based upon serious economic reasoning. The fact that the case for protection as commonly presented appeals primarily to the first type of argument is hardly strange, since economic fallacy often, if not generally, finds wider acceptance than truth; but it is an interesting commentary on the intellectual strength of protectionism.

ARGUMENTS RESTING UPON POPULAR FALLACIES

✓ (a) *The Maintenance of Wages, or the Protection of the Standard of Living.* — This is one of the most widely used and certainly one of the hoariest arguments for protection, frequently found in the writings of self-styled "economists." It insists that a country with high wages will be undersold by a low-wage, "pauper-labor" country, and that in the ensuing competition, the wage level of the former must be driven down. Protection against imports from cheap-labor areas is therefore felt to be justified as a means of maintaining a high standard of living.

This argument rests upon a complete misconception of the relation between wages and prices. High wages are the consequence of high productivity of labor. They will never be the cause of high costs and high prices unless labor is inefficient. But the combination of high wages with inefficient labor is most unlikely since employers rarely pay labor more than it is worth. Economic theory tells us that any class of labor tends to receive a wage equal to its marginal productivity. In a country where labor is generally productive, wages in the leading lines of industry will be high, as they will likewise be in less important branches which must compete with the former for their labor.

According to the theory developed in earlier chapters, we also know that countries will specialise in the production of those commodities which require relatively large amounts of their most abundant and hence cheapest factors. Therefore the possession of plentiful cheap labor of a certain kind will, of course, constitute an advantage in international competition — 'so far as concerns products which can be efficiently produced

by methods which require much of this sort of labor. Other countries, with relatively abundant capital, or land, or labor of another type (technical or skilled labor, as contrasted with semi-skilled or unskilled) will have a price advantage in commodities which require primarily these factors in their production.

Thus Japan is a formidable competitor in the world's markets for tea, silk, chinaware, and certain types of cheap, mass-production articles, while the United States is no less formidable where automobiles, typewriters, industrial and agricultural machinery, cotton, wheat, and petroleum products are in question. In the production of certain goods, especially of cotton textiles, Japanese competition with the United States and with other countries, in particular Great Britain, is very sharp. But such competition is nothing new. Industries developed in one country often prove to be adapted to productive conditions elsewhere. Their expansion into these other regions is to be expected, is indeed inevitable in a progressive world. The most effective way of meeting it is not by the erection of a tariff wall, which cuts off export markets and reduces the national dividend, but by means of improvements in technique, readapting the industry to the productive conditions (relative factor supply) in the country where the industry originated. It may of course be that a particular industry, though developed in one region, turns out later on to be definitely and incomparably better suited to some other region. In that event, the best long-run solution — at least from the point of view of maximising the national income — is to face the necessary readjustment and facilitate it by every means possible.¹

It is not to be denied, of course, that readjustments of this sort are painful. Moreover, they may be expected to continue, since many types of manufactures, notably those in which automatic machinery finds ready application, tend to spread widely over the earth's surface, in particular to coun-

¹ For a specially good discussion of the threat of low-wage competition, see F. W. Taussig, *Some Aspects of the Tariff Question*, pp. 42-49.

tries with plentiful cheap labor. There is no reason, however, to expect a lowering of wage levels in the older manufacturing nations. In the long run, according to the basic principles of international trade, countries such as Japan should increasingly dominate in those industries requiring abundant cheap labor, while the older manufacturing countries should more and more specialise in industries in which new techniques, large capital investment, and skilled and technical labor are of considerable importance. This is merely the natural path of development along the lines of international specialisation, leading in the end to an enlarged volume of world trade and higher standards of living, rather than lower, for all concerned. The nineteenth century witnessed just such a transition in the spread of the Industrial Revolution from England to Germany and the United States. There was then no lessening of the basis for industrial differentiation, and there was a great increase in standards of living in each of these countries and in the volume of mutually beneficial trade. No reason exists for expecting any different result in the future.

The costs of such a development are essentially of a short-run, frictional nature. This does not mean, however, that they are not serious — unemployment, idle equipment, and business losses are always serious. But their size varies directly with the rapidity of the change to which adjustment has to be made. When this change is gradual, as much of it has been in the past, the tempo of adjustment and its attendant temporary dislocations are bearable. For this reason, a slow process is to be desired by all concerned.¹

(b) *Protection of the Home Market.* — By raising a tariff wall against imports and thus stimulating the growth of home industries, it is argued, we thereby develop purchasers for

¹ The intensity of recent Japanese competition in textiles is a phenomenon of rapid change, in particular of changing currency relationships. The excessive depreciation of the yen on the foreign exchanges has been chiefly responsible for the difficulties of the British textile industry. For Japanese wages have always been low, and the development of Japanese manufacturing industries has been for years a reasonably steady, predictable phenomenon which could be counted upon. Not so with exchange depreciation.

other domestic producers; a home market for our own producers is created. This appeal has been directed especially toward farmers in this country, as a means of winning their consent to high tariffs for manufacturing industries.

No argument for protection is more completely fallacious than this one, which overlooks the patent fact that protection does not create a *new* market but merely substitutes a domestic for a foreign one. If we exclude foreign products from our markets, we thereby prevent foreigners from acquiring the means of buying our wares. Our imports from other countries, that is, provide them with the purchasing power necessary to buy our exports. Shut out imports, and eventually (as was demonstrated in the first pages of this chapter) we must expect to see our exports decline by a similar amount. The only serious alternative means of maintaining the old volume of exports would be for us to lend the foreign buyer their purchase price — and ultimately, owing to the accumulation of interest charges, this policy would necessitate either a rising volume of imports or cancellation of the loans.

(c) *Increased Output.* — Closely related to the home-market argument is the contention that protection, by stimulating the growth of a new industry, increases by its output the total production of the country. This sort of statement errs, of course, in seeing only one aspect of protection and its effects. It cannot be denied that a tariff may, by excluding imported products for which there exists an effective demand, call into being an entire new industry where none existed before. As examples there may be cited the beet-sugar industry of the United States and numerous manufacturing industries in the new succession states of the Austro-Hungarian Empire — Czechoslovakia, Hungary, and Jugoslavia.

This effect of protection is obvious and striking. Almost as obvious, though naturally not emphasised by protectionists, is the higher price that must be paid by consumers for the products of the protected industries. Less evident but quite as important is the fact that the creation of the protected industries necessitates the transfer of economic resources from more

productive to less productive fields of activity.¹ Land, labor, and capital which would have been devoted to producing exports with which to procure the articles granted protection will now be transferred to the protected industries. That their productivity is lower in these lines is proved by the very fact that protection is necessary. To acquire a given quantity of the commodities in question, a more valuable collection of the requisite agents will be needed to produce it at home than to produce the exports which will buy that same bill of goods abroad.

(d) *Keeping Money at Home.* — The fear of sending money out of the country in the purchase of imports has at times been played upon to derive support for protection. This popular fallacy is well expressed in the form of a remark falsely attributed to Abraham Lincoln: "I do not know much about the tariff, but I know this much, when we buy manufactured goods abroad we get the goods and the foreigner gets the money. When we buy the manufactured goods at home we get both the goods and the money."²

Except for its occasional wide currency, this argument scarcely deserves consideration, for, as Beveridge so pointedly says of the quoted statement, "it has no merits; the only sensible words in it are the first eight words."³ The view represents, of course, the crudest form of mercantilism, with its emphasis upon money as a form of wealth. It is only necessary to point out that in international trade goods pay for goods, and that money (gold) moves only to perform the function of adjusting disturbances to trade. It must of course be granted that by the imposition of new tariffs or the raising of old ones, we might temporarily acquire additional "money."

¹ The above discussion rests on the assumption of full employment of labor in the country involved. Protection in relation to the problem of unemployment is treated in a section of the following chapter. The well-known argument of Schüller, though more subtle, is in part similar to the increased output argument, in part parallel to the argument relating to unemployment. For a full discussion of Schüller's position, see Haberler, *The Theory of International Trade*, pp. 253-259.

² Cited in Beveridge, *Tariffs: The Case Examined*, p. 27.

³ *Ibid.*, p. 28.

As to the desirability, under normal circumstances (*i.e.*, when a country has adequate gold reserves), of securing money in place of useful goods for our exports, one has only to re-read Hume's caustic comments to be convinced that such an objective is fatuous. In any event, such a tariff-induced import of gold would be a once-for-all affair. After the initial effect, the movement of gold would again be determined by changes affecting the international balance of payments.

(e) *Tariffs for Retaliation and for Bargaining.* — It is frequently argued that tariffs should be imposed or raised as a means of retaliating against tariff increases on the part of other countries. Aside from the emotional satisfaction derived from hitting back, such a course of action has absolutely nothing to recommend it. For it falsely assumes that the benefits of free trade exist only when both nations concerned practise it; that is, when trade is mutually free. A moment's reflection will show that a country following a free-trade policy derives the chief gain itself: by taking advantage of the geographical division of labor it secures a larger real income. If other countries progressively restrict trade, the former is of course injured, since its acquisition of imports is made more difficult. There is, however, no gain but only additional injury if it in turn restricts imports. We have a clear case of biting off one's nose to spite one's face. Beveridge puts the whole matter pithily in the form of a fitting analogy. "If one country has good harbours while all the rest have bad ones, it will not realise the advantages of its good harbours so fully as if all the rest had good ones also. But it will realise some advantage; it will be better off than if it, too, sank rocks all round its coasts."¹

The argument for tariffs as an instrument of bargaining was advanced in England prior to her desertion of a policy of relatively free trade in 1931. "We must," it was urged, "have some concessions to offer in order to get other countries to reduce their barriers to our exports. Therefore let us impose duties as a means of putting us in a strong bargaining position."

¹ *Ibid.*, p. 110.

tion." That there is some validity in the position is indicated by the success of Secretary Hull's trade-agreement program, which consists essentially in a swapping of duty reductions. It is, however, limited in application to a free-trade or very low-tariff country, which at the outset has nothing to offer in the way of concessions. Moreover, the bargaining lever created by newly-imposed duties may be seized by vested interests which grow up behind them. The lever is then more likely to be used to pry additional protection out of the home government than to extract tariff reductions out of foreign governments.

(f) *Equalisation of Costs of Production.* — The argument has frequently been advanced, especially in the United States, that a tariff will be truly scientific if it succeeds in equalising the costs of production of home and foreign producers.

The doctrine has an engaging appearance of fairness. It seems to say, no favors, no undue rates. Offset the higher expenses of the American producer, put him in a position to meet the foreign competitor without being under a disadvantage, and then let the best man win. Conditions being thus equalized, the competition will become a fair one. Protected producers will get only the profit to which they are reasonably entitled, and the domestic consumers are secured against prices which are unreasonable.¹

Thus skillfully and persuasively formulated, the argument appears eminently fair to both producer and consumer. It has, indeed, been sufficiently convincing to legislators in Congress to lead to the embodiment of the principle of equalising costs of production in the "flexible" provisions of the Tariff Acts of 1922 and 1930.

Quite aside from the difficulty of discovering the costs of individual producers and of deciding which producers' costs to equalise, this principle is the very opposite of scientific — it is the most arrant kind of nonsense. Its consistent application would lead to the adoption of a scale of duties each of which corresponded to the difference in costs, whether large

¹ Taussig, *Free Trade, the Tariff, and Reciprocity*, p. 134, in the course of criticising the argument.

or small, at home and abroad, ending logically with the complete annihilation of international trade.¹ While presumably not even enthusiastic proponents of cost equalisation would care to push consistency this far, the principle itself provides no rational basis for excluding certain products from the "benefits" of protection. But if its advocates stop short of all-round equalisation of costs by protective duties,

they have to say where they will stop and why. They have to find some ground, other than the principle of equalising costs, for deciding which industries, unable to meet foreign competition without a tariff, shall be enabled by a tariff to do so, and which shall not be so assisted. "Equalisation of cost of production," unless carried to its absurd logical extreme, will not save them from the risk of deciding this according to the vigour with which each industry makes its case or by counting the votes that it can command.²

A special and restricted form of the equalisation of costs argument is frequently encountered. This is the plea that a higher general burden of taxation justifies the imposition of increased duties. Thus after the War in Great Britain it was claimed that her producers were at a distinct disadvantage as compared with German manufacturers, owing to the heavy tax burden necessitated by the huge national debt, a burden which Germans escaped as a result of the virtual repudiation of their debt through inflation. This handicap was advanced as a reason for protection.

Ignoring the fact that German taxpayers had to carry the burden of reparations, there are two serious considerations against this argument. In the first place, many taxes are not borne by the producer; they do nothing to raise his costs. This is true of income taxes and taxes on profits, provided they are levied without discrimination between industries. The

¹ To be completely consistent, high-cost foreign producers should be given a bounty equal to the differences between their costs and the costs of efficient producers in the "equalising" country; otherwise, domestic and foreign costs would be but partially equalised. There is of course little likelihood that sponsors of the principle would accept in practice this perfectly consistent application.

² Beveridge, *op. cit.*, p. 48.

incidence of such taxes is on final income (wages, salaries, dividends) after it has been distributed in the course of production. Secondly, so far as taxes on production (e.g., turnover taxes, excise taxes) do bear generally on all industry more heavily than elsewhere, any attempt to "equalise" this extra burden on domestic producers through protection will be ineffective.

This is obvious so far as concerns neutral markets, where the exporters of the heavily taxed nation must meet foreign competition. It is equally true, if less obvious, with respect to competition in the home market. The imposition of an identical all-round burden (whether it be the result of taxation, of high interest charges, or of labor inefficiency) does, it is true, raise the general level of costs and prices. Thereby all producers are, to the extent to which costs have been raised, rendered less capable of meeting foreign competition. Moreover, some producers, hitherto barely able to meet foreign competition in the domestic market, will no longer be in a position to do so, just as other producers, formerly just capable of meeting competition in export markets, will now be forced to withdraw.

All this must be admitted. Any development which raises costs does alter the relative competitive position of every industry so affected (*i.e.*, it changes the scale of comparative costs by pushing the whole scale upward). But such a general rise in costs in no way invalidates the general principle: that specialisation should take place in those lines in which costs continue to remain low. There will still remain industries which are capable of producing at costs below those of foreign competitors, though their numbers will be reduced, and the same generalisation holds of industries producing for the domestic market.¹ Assuming the community believes the taxes in question are socially desirable, what is called for is a shift of production out of the least productive industries into

¹ In the last resort, assuming the level of taxes was so high as to raise the cost of every single commodity above that of some foreign competitors, the mechanism of gold flow (or on the paper standard, of exchange rates) would operate to correct the situation.

lines where the relative prices of the factors, together with the tax charges, permit the continuance of efficient production. To prevent this adjustment by the imposition of protective duties is to force the use of resources in industries to which, in view of the total situation, they are not adapted.

A concrete illustration of the issues involved is to be found in the present Social Security taxes in the United States. That portion of the tax levied on payrolls and paid by employers does, in part at least, tend to be passed on in the form of higher prices. To this extent the costs of production are raised, and producers, especially those with relatively large payrolls, are put at a disadvantage relative to foreign producers who are not subject to a similar tax. Yet granting that the aim of the Social Security program is worth while and the method of raising funds the most satisfactory available, protection can offset the tax only by artificially stimulating industries which under the new set-up are unable to stand on their own feet.

The point at issue is even clearer where a tax burden of long standing is in question. For here industry generally would have become adjusted to the situation. Only those lines of production would have survived which could pay all costs of production, including taxes. Protection "to equalise the tax burden" would then obviously lead to a more uneconomic allocation of resources.

The case is naturally different when a particular line of production is subject to a differential tax, as for example an individual excise tax. Haberler expresses the matter concisely as follows: "In that case an equalising duty — a revenue duty — is justified. The fact that a particular product is especially suitable as an object of taxation in no way alters the advantages of specialising upon its production, and it would be irrational to prevent specialisation in the direction indicated by comparative costs by refusing an equalising duty to offset the tax."¹

¹ Haberler, *op. cit.*, p. 252, n. In connection with the Social Security taxes mentioned above, the principle of an equalising duty might consistently be

SERIOUS ARGUMENTS FOR PROTECTION

The various more dignified arguments for protection may be grouped, in harmony with the discussion in Part II, Chapter I, according to the end they are presumed to serve. The larger proportion of them advocate protection as a means superior to freedom of trade of achieving the generally accepted goal of maximisation of the national income. This group will be considered first.¹ The remainder may be classified as serving some alternative end, to be specified in each case.

1. MAXIMISATION OF INCOME ARGUMENTS

(a) *Infant-Industry Protection.* — Alexander Hamilton stated this argument with great clarity and persuasiveness in his famous "Report on Manufactures" in 1791. Somewhat later Friedrich List, a German economist who spent many years in the United States and acquired a strong admiration for Hamilton, formulated it in greater detail. Basically, proponents of the infant-industry argument have no quarrel with free traders so far as concerns the desirability of international specialisation. In fact, their position rests on the advantage of widening the area of the geographical division of labor. But they do not believe the ideal degree of specialisation will be attained under free trade. Potential industries, which might develop and thrive with the aid of temporary protection, will never come into being in the face of the competition of established and powerful rivals. Given a few years of encouragement by protection, however, and industries *shortly capable of meeting foreign competition unaided* may be created.² After this period of development, the national income will

applied to the products of industries whose labor costs are comparatively large, since these industries are put at a relative disadvantage. The practical difficulties of such an application of the principle would, however, be great.

¹ Certain ones of this class claim the realisation of other secondary ends as a benefit. Where such double benefits are urged, the subsidiary claims will be analysed as a subordinate part of the main discussion rather than under a separate heading.

² Protective duties are not, of course, the only means of facilitating the development of infant industries. Hamilton favored bounties as a superior alternative.

be enhanced by the superior production of the new domestic industry over its foreign competitors.

It should be noted that protection for infant or nascent industries, as advocated by Hamilton and List, calls for a very selective application of tariff duties. Only those industries should be sheltered which give reasonable promise of eventually being able to stand unaided (those intrinsically suited to the productive facilities of the country in question, or capable of developing a comparative advantage). Moreover, such protection should be granted as a temporary measure only, being removed when the industry has grown strong — or when it fails to prove itself. Finally, infant-industry protection is suited only to nations which are in the process of developing their industry and commerce; countries possessing a well-developed industrial system need adopt no measure of artificial respiration.¹

numbering among their advantages over tariffs the following considerations: (1) They are more positive and direct in their effects; (2) they do not raise prices, or not so much; (3) they do not, like protection, produce scarcity; (4) they promote export, which protection does not.

¹ Hamilton's ideas on protection are to be found in his "Report on the Subject of Manufactures," reprinted among his *Papers on Public Credit, Commerce and Finance*, New York, 1934. The more important sections are included in Taussig's *Readings in International Trade and Tariff Problems*. List's position is developed in *The National System of Political Economy*, a pamphlet swollen to the size of a book. Again, Taussig's *Readings* contains the more salient passages. While List may be called one of the originators of the infant-industry argument, his reasoning is full of crude protectionist fallacies; he makes much of the cultural advantages and the political power that he presumes to accompany the development of manufactures; and his position is by no means clear on a number of points. One of the most accurate statements of the case for infant-industry protection may be found in J. S. Mill, *Principles of Political Economy*, p. 922 (Ashley edition). The passage is worth quoting:

"The only case in which, on mere principles of political economy, protecting duties can be defensible, is when they are imposed temporarily (especially in a young and rising nation) in hopes of naturalizing a foreign industry, in itself perfectly suitable to the circumstances of the country. The superiority of one country over another in a branch of production often arises only from having begun it sooner. There may be no inherent advantage on one part, or disadvantage on the other, but only a present superiority of acquired skill and experience. A country which has this skill and experience yet to acquire, may in other respects be better adapted to the production than those which were earlier in the field: and besides . . . nothing has a greater tendency to promote improvements in any branch of production than its trial under a new set of conditions. But it cannot be expected that individuals should, at their

Economists quite generally accept the infant-industry argument in principle. Most of them, however, would hesitate to recommend the application of this type of protection in any concrete instance because of the extreme difficulty of fitting the theoretical requirements to the detailed facts of industry. In plain English, how is one to decide whether any particular industry is suited to a given country — a country which by hypothesis must be a young and relatively undeveloped one? Will the necessary type of labor and kinds of capital be attracted to or developed in this country? If so, will costs of production ultimately fall below the level of foreign costs? Questions such as these must be answered if infant-industry protection is to be applied in accord with the requirements of the argument; yet the information needed to answer them is rarely if ever available.¹

In addition to the difficulty of deciding which industries, if any, should be granted temporary nurturing protection, there is a further consideration weighing heavily against hasty acceptance of the policy. This is the fact that even when the infant becomes a powerful giant, he is unwilling to relinquish his teething ring.

Nearly every industrial tariff was first imposed as an infant-industry tariff under the promise that in a few years, when the industry had grown sufficiently to face foreign competition, it would be removed. But, in fact, this moment never arrives.

The interested parties are never willing to have the duty removed.

own risk, or to their certain loss, introduce a new manufacture, and bear the burden of carrying it on until the producers have been educated up to the level of those with whom the processes are traditional. A protecting duty, continued for a reasonable time, might sometimes be the least inconvenient mode in which the nation can tax itself for the support of such an experiment. But it is essential that the protection should be confined to cases in which there is ground of assurance that the industry which it fosters will after a time be able to dispense with it; nor should the domestic producers ever be allowed to expect that it will be continued to them beyond the time necessary for a fair trial of what they are capable of accomplishing."

¹ The difficulties encountered by Professor Taussig in his attempt to answer some of these questions with reference to certain American industries, even after protection had been in force for many years, and the tentative judgments his careful study forced him to give, speak volumes on this score. See his *Some Aspects of the Tariff Question*, 3d edition, Cambridge, 1931.

Thus temporary infant-industry duties are transformed into permanent duties to preserve the industries they protect. Even if a part of the industry does become able to stand upon its own feet, there will always be *in addition* less efficient concerns which have come into existence behind the shelter of the duty and which would disappear were the duty removed. Moreover, even industrialists who could survive quite well under Free Trade strongly oppose the removal of the duty, either because they wish to continue making monopolistic profits under its protection or because they feel they may need it if foreign competition becomes keener. (Hence the fact that an infant-industry duty is not subsequently removed, as promised, does not prove that it has not in part fulfilled its purpose.)¹

There is, indeed, much to be said for the view that protective duties are not necessary to stimulate the growth of manufactures suited to any particular country, that private initiative will seek out (possibly after some delay) all opportunities of profitable investment. The existence of free trade over the entire continental area of the United States has not prevented new industries from springing up in the younger sections of the country in competition with established old ones on the eastern seaboard. As examples we may cite the boot and shoe industry of St. Louis, the cotton textile industry of the South, the coal mines of Illinois, and many other lines of production.

Certainly it can be said that the infant-industry argument has no applicability to the United States today, or any other mature industrial nation. Such countries have long since passed through the "agricultural-commercial" stage of development to which phase alone the argument is relevant. Any possible exceptional industries are already provided with the requisite general environment for their growth, and if they fail to make their appearance, there is a strong probability that they are unsuited to the country in question. The use of the argument in these circumstances justifies the suspicion that it is merely a smoke-screen for the protection of inefficiency.

Finally, even granting the possibility that there are still exceptional cases in the United States of industries suited to

¹ Haberler, *op. cit.*, pp. 281-282.

nurturing protection, and that these cases can be unexceptionably identified, Hamilton's arguments in favor of direct bounties on production still hold good. If we must subsidise a particular industry, let us know what we are doing and how much it costs us.

✓ (b) *The Risks of Specialised Industries.* — Two lines of attack on free trade are based on a common fear of the risks of a highly-specialised industrial order. The first of these contends that the specialisation which occurs under free trade subjects the economy to the disastrous shocks of fluctuations in economic activity in other countries. It therefore urges that an increased diversification of industry, brought about through protection, would result not only in a higher average national income in the long run, but also in the manifold benefits of greater stability. ... The second argument claims that unrestricted specialisation will involve, ultimately, a violent and costly readjustment as agricultural countries fill up, protect their own manufacturing industries, and consume their own agricultural products. When this stage is reached, predominantly industrial countries will face a sudden loss of markets and of raw material and food supplies. They will be forced to undertake a cataclysmic shift in their structure of production, all of which could be avoided if protection, especially of agriculture, were introduced in sufficient time to prevent the disease of undue specialisation.

With respect to the first line of argument, we must distinguish between different types of international disturbance against which protection is supposed to provide insurance. Of these, the chief ones are three in number: cyclical fluctuations in business activity, secular changes in international competitive strength, and wars. So far as cyclical fluctuations are concerned, there is no evidence to show that these have been less severe in countries with high protection (Germany, France, the United States) than in countries with low tariffs (Great Britain and Holland). Certainly during the recent depression, even prior to 1931, when both countries were on the gold standard, Great Britain suffered much less than did

the United States. Other measures, especially those related to monetary policy, offer more hope than tariffs as a means of combatting business cycles.¹

With regard to secular changes in international competition and in the location of industry, it must be admitted that these undeniably force readjustment. But competition is the source of progress — any calculation of the costs of reducing readjustment to international changes must include some estimate of the losses from stagnation as well as the higher prices resulting from protection. We may refer again to the discussion of the protection of the standard of living, where this matter is dealt with more fully. In any event, the advantage to be gained is decidedly questionable.

For any nation to become so self-sufficient as to reduce to a minimum the shock of industrial readjustment which would become necessary upon the outbreak of a major war would be so costly in terms of lowered standards of living as to be out of the question for most countries. The United States, however, which exports less than 10% of its production and imports a similar proportion of its total consumption, could undoubtedly pare down the volume of its imports still farther without serious hardship, confining them primarily to tropical products and minerals of which we possess totally inadequate supplies. The considerable cost of such a policy would have to be weighed against the possible but uncertain benefits of lessened readjustment in time of war. But this is only one element in the situation.¹ A much broader problem is also involved: the whole question of whether it is not better to attempt, as our trade-agreements program is attempting, to open up the channels of international trade as a means of reducing national rivalries and tensions, of improving the economic situation throughout the world, and thus of lessening the chance of war, than it is to withdraw into ourselves and thus to add to rather than subtract from the economic difficulties which confront other nations. This question, it is clear, is but one aspect of the general world political problem of abolishing war and

¹ For a fuller discussion of this topic, see Part II, Chapter XII.

organising for peace as an alternative to preparing fatalistically for and thereby making more inevitable another disastrous conflict.

We turn now to the second line of argument against unrestrained specialisation, which foresees a sudden loss of markets and sources of supplies for industrial countries as agricultural nations themselves fill up and develop industries. This type of reasoning bulked large in the writings of a number of German economists in the nineties and the early years of this century; it is particularly associated with the name of A. Wagner.¹ There are many considerations against it. One of the most important is this: that although the basis for international specialisation inevitably changes as the newer countries develop (*i.e.*, their factor supply alters), a new though different basis for such specialisation emerges. Thus England, during the better part of the nineteenth century the producer par excellence of manufactured articles, though she watched with anxiety and foreboding the growth of industry in Germany and the United States, did not witness the destruction of her industries by these rivals. Although competition in some lines has been intense and shifts in the direction of production have been necessary, both these countries have been among England's best customers. Plenty of room for specialisation has continued to exist.

Moreover, the adjustment that Wagner feared has proved in the past and presumably will continue in the future to be gradual rather than violent. A shortage of exportable agricultural products will, if it comes, make its appearance slowly, in the form of a progressive rise of prices. As this happens, the incentive to increased production of the relevant commodities in the older industrial countries will be provided. No violent shock such as Wagner had in mind is to be anticipated.

¹ Only the economic aspects of Wagner's argument are given here. It has also a sociological side to which reference will be made at a later point. A most effective reply to Wagner was written by Brentano, entitled "The Terrors of the Predominantly Industrial State," selections from which are to be found in Taussig's *Selected Readings in International Trade*. Some of his arguments are reproduced here.

pated. In view of this, one may well ask the question: why incur the costs of transition earlier than necessary?

Finally, the necessity of relying upon home supplies of various raw materials and foods may never arise at all. For there are many competing sources from which the imports of the industrialised nations are drawn, none of which give any indication of approaching exhaustion. Moreover, as Haberler points out, two recent developments still further reduce the dangers of industrial specialisation. These are, first, the great progress in agricultural technique and the accompanying increase in output of a worldwide nature, and second, the slowing down of the rate of population growth in both agricultural and industrial countries, a movement which appears likely to spread. Combined, these eliminate or at least greatly lessen the prospects of a shortage.

(c) *Conservation of Natural Resources.* — It is probable that in some countries the production for export of many irreplaceable natural resources is going forward at such a rate as seriously to threaten their early exhaustion. As examples, we may cite petroleum products and copper in the United States and Mexico. Protective tariffs, which will reduce exports through a prior or simultaneous reduction in imports, have been suggested as a means of restricting the excessive exportation of such resources.¹ Though the income of the present generation would be reduced, that of future generations might be increased even more by such action.

If there were no other means of meeting the situation, it is possible that protection might be a suitable measure. But in fact protection is a clumsy, roundabout, and ineffective way of furthering the end in view. For there is little probability let alone certainty, that the exports to be checked would be the ones aimed at. The most direct way of attacking the problem would be through the imposition of export duties. For the United States, this method is blocked by an explicit

¹ This argument is stated and criticised by Frank D. Graham in his *Protective Tariffs*, together with a similar argument applying to the "amelioration of human resources" which seems even more tenuous.

constitutional prohibition. Direct conservation measures, however, such as the regulation of output, are another more efficient and probably less expensive measure than generalised protection.

(d) *Increasing- vs. Decreasing-Cost Industries.* — Occasionally one meets the suggestion that the national income might be augmented by permitting the widest possible access to foreign sources for commodities produced under conditions of increasing cost, while stimulating the growth of industries of decreasing cost by protective tariffs.¹ Thereby the rate of domestic expansion in some increasing-cost industries might indirectly be lessened, the output of decreasing-cost industries directly increased at falling costs, with the possibility of these declining even below foreign levels.

This argument would be perfectly valid if the assumptions necessary to it could be granted. Even so, any possible gain from protection of this type would be highly conjectural and probably quite impossible of measurement, raising the frequently recurring problem of the desirability of incurring a certain loss in the hope of securing a very dubious gain. But one crucial assumption in particular, that of the very existence of decreasing-cost industries, is open to serious challenge. As was pointed out earlier (p. 297), internal economies cannot continue indefinitely under competitive conditions, while net external economies arise infrequently. Barring conclusive proof that conditions of decreasing cost actually exist in important industries and that realisation of their economies is reasonably to be expected, the argument has nothing to recommend it.

A very similar but somewhat narrower line of reasoning has been advanced in England in recent years. Secure the domestic market to domestic producers, it was said, in those lines where the economies of mass production bulk large, thereby permitting them to adopt the most economical scale of production, ultimately perhaps even lowering costs below those abroad.

¹ This argument is also considered by Graham.

Unless the supposed reduction of the prices of increasing-cost products be included in this argument, thereby transforming it into the preceding one, it has no merit whatsoever unless it be assumed that costs will fall below the foreign level, in which case it becomes merely a special form of the infant-industry argument. In that event, it is of course subject to all the objections holding against the latter. In addition, the industries in question

must be ripe for large-scale production, but with none of the manufacturers in them prepared to undertake it. The argument assumes something that looks perilously like lack of initiative on the part of the home manufacturer. If the circumstances are such that, after the tariff, one of the home manufacturers by enlarging his scale of production could bring prices below those of his foreign rivals, it must have been open to him to do the same thing before the tariff.¹

Beveridge also calls attention to the possibility that the expected appearance of large-scale production units may never occur, that instead there may take place a mere multiplication of small plants to absorb the domestic market (citing the British automobile industry to this effect), or that a monopoly or quasi-monopoly may be established. Again, as with the infant-industry question, if the conditions seem suited to the use of some type of stimulus, it would be better given in the form of a direct bounty, which is above-board, easily calculable, and more likely than a protective duty to be temporary.

(References for this chapter will be found at the end of the following chapter.)

¹ Beveridge, *op. cit.*, p. 95.

CHAPTER V

THE CASE FOR PROTECTION (*Continued*)

2. PROTECTION AS A MEANS TO ENDS OTHER THAN MAXIMUM INCOME

(a) *Reduction of Unemployment.* — Supporters of protection as a means of combatting unemployment tacitly assume, though the issue is rarely formulated clearly, that the employment of labor is itself a desirable end, to be achieved even at the cost of a reduction in the national dividend. Now everyone would agree that it is better to have men working than idle, even if when idle their essential needs are met by relief, since unemployment breeds loss of morale and of skill. A rational person, however, would not agree to this proposition regardless of the cost. For while employment is undeniably preferable to unemployment, it is not worth while if it can only be obtained by a great lowering of the standard of living of all the population. If there were a strong case for protection as a remedy for unemployment, this issue of cost would have to be thrashed out on the basis of some balancing of advantages. But the conditions under which protection can be expected to relieve unemployment are, contrary to popular opinion, extremely limited.

The naïve protectionist sees only the direct and obvious increase in employment which results from the imposition or raising of a duty. The usual free-trade answer, that the newly-employed workers in the protected industry are counterbalanced by an equal number of unemployed in the export industries, also suffers from inadequate analysis, although it generally is true, as we indicated at the beginning of the preceding chapter, that the burden of proof rests upon him

who asserts that a reduction of imports will not ultimately be followed by an equivalent reduction of exports.

There are two possible cases for protection to be reckoned with, depending in the first instance, indeed, upon this very matter: the way in which exports respond in the face of a restriction of imports. Let us consider first the prospects of protection as a remedy for unemployment when exports are assumed to fall off *pari passu* with imports.

(i) Exports and Imports Diminish Simultaneously. — Assume the new duties are levied on products which are being produced at home for domestic consumption,¹ though in the face of such stiff competition from imports that unemployment has arisen. This means that there is present, ready to respond promptly to any opportunity for a profitable increase in output and employment created by the imposition of the duty, the business organisation, equipment, and type of workers needed. It is clear that an initial increase in employment is to be expected in this sector of the economy, the amount thereof depending primarily upon the elasticity of demand. To avoid unnecessary complications, we shall assume this to be unity, so that the sum spent on protected products is identical with that formerly spent on imports.

The increase in employment in the protected industries is offset, however, by an equivalent decline in employment in the export trades. It must be admitted that if the newly-employed protected workers use their entire incomes to purchase goods formerly exported, unemployment among export workers will disappear and the new employment in the import-competing (protected) industries will be a net addition to the sum total of employment.² This case is obviously rather academic, since in all likelihood only a part (in the United States, a relatively small part) of any worker's income will be spent on the products of export industries. It is urged, however, that if there is unemployment elsewhere in the economy, expenditure of their incomes by the re-em-

¹ Obviously an export industry cannot be helped by protection.

² This case is discussed by Beveridge, *op. cit.*, pp. 58-60

ployed protected workers will bring about a secondary diminution of unemployment there which will offset the increase in the export industries.

Clearly, analysis of this problem necessitates consideration of the initial and induced effects of additional employment-giving expenditure.¹ Equally clearly also, it requires that attention be given to the direct and indirect consequences of the *decrease* in employment which appears in the export trades simultaneously with the increase in employment in the protected industries. In order to attack the problem along both fronts, it is necessary first to acquire some understanding of the way in which an increase (decrease) in employment tends to spread through the economy, and of the limits to this spread.

Fortunately the essential effects of and limitations on employment-creating expenditure can be briefly stated. We may begin our account of this matter by using a simplified numerical illustration. Suppose that \$1,000,000 formerly spent on imports is now, as a result of new duties, spent on

¹ This is the principle of the "multiplier," which has been elaborated elsewhere by Mr. R. F. Kahn (*Economic Journal*, 1931, p. 173) and by Mr. J. M. Keynes (*The General Theory of Employment, Interest and Money*, Chapter 10). These writers apply the principle to the problem of public works or investment expenditure. There is no essential difference, however, so far at least as concerns the short-run problem of employment, between the effects of an increase in employment generated by an expenditure on public works and one brought about by the expenditure at home of funds previously spent abroad.

Professor Haberler calls attention to this fact (*op. cit.*, p. 261), but because he considers the application of the theory only in a unilateral fashion, excluding consideration of the secondary effects of unemployment among export workers, he appears to agree that this argument for protection is valid in principle. His criticisms of the argument are based on the apparent assumption that industries for whose products the demand had increased would have to draw on other industries (among others, the export industries) for part of their labor supply, and that immobility of this labor would check re-employment. The validity of this line of attack may be conceded. Yet it does not, I feel, deal with the heart of the issue. To bring this out clearly, I shall continue to assume that, both in the protected industries and in those which benefit from the increased incomes of the protected workers, the reserve of unemployed labor is of the requisite types — that it is unnecessary to divert labor from other industries in order to expand output. If on these most favorable grounds protection can be shown to be a questionable method of relieving unemployment, the considerations raised by Haberler (pp. 262-263) provide additional reasons of a pragmatic nature for skepticism toward the policy.

the products of the protected industries, and that all of this sum goes to pay wages.¹

Consider the effects of this new wage outlay independently, for the time being, of what is happening in the export industries. If the newly-employed protected workers spend all their incomes on the products of domestic industries in which a large body of unemployment exists, an additional \$1,000,000 worth of employment will result. This will be followed, if the secondary re-employed workers also spend all their wages, by a similar volume of re-employment elsewhere. If there is no hold-up in the stream of spending, eventually unemployment will be totally abolished, and the further effect of the continued expenditure of this \$1,000,000 of additional income will be to cause an infinite rise of prices.

Merely to state the outcome of increased expenditure under the given assumptions is sufficient to indicate its unreality under anything resembling normal conditions. What is lacking, of course, is provision for "leakages" in the stream of spending. The most important leak results from the fact that the average worker will not spend (whether on consumers' goods or investments) all his new income, but instead will use some part of it to build up reserves of purchasing power (hoards). Again, some of the income will be used to repay debts. If the creditors are ordinary individuals, probably they will not spend or invest all their receipts. If the creditors are banks, the funds used to repay the debts are extinguished. In addition to these leaks in the stream of spending, some of the additional demand may be met by sales from stocks on hand, or expenditure in other directions (notably for unemployment relief) may be reduced, constituting an offset to the initial increase in incomes. It is on the basis of considerations such as these that Mr. Keynes arrived at his estimate of a multiplier of 2 for the United States.² Applied to the foregoing concrete illustration, this

¹ This last provision is an oversimplification which alters in no essential manner the nature of the reasoning or the conclusions.

² *Economic Journal*, September, 1936.

means in effect that of the initial expenditure of \$1,000,000, half is passed on to other workers in the purchase of their products, half is hoarded or disappears in the repayment of bank loans, etc., that half of the \$500,000 spent is likewise continued in circulation, half removed, and so on in an infinite series of transactions. The total of expenditure on employment is the summation of this series, or twice the initial outlay.

At the outset of this discussion, attention was called to the fact that not only the employment-creating effect of an additional volume of expenditure, but also the employment-destroying effect of reduced payments to labor in the export industries must be taken into account. It is clear that the reduction in the outlay on labor by employers in this sector of the economy will set up a process exactly similar in nature but opposite in its consequences to that established by the increase in employment in the protected industries. If there is a positive action of the multiplier in the one case, there will be a negative action thereof in the other. If the multiplier has the same value with respect to the decrease in expenditure that it has with respect to the increase, and if the decrement in income is nowhere directly offset by the increment in income, the net result of the two sets of reactions will be to cancel one another.

Before considering other possible results, it will be well to examine more closely the mechanism of a diminution in expenditure, to see if it really does act in a fashion parallel to that of an increase. Suppose that the value of exports is reduced by \$1,000,000, and that as a result, employers contract their wage outlays by a similar amount. If the unemployed export workers had formerly spent all their incomes, and now cease their spending entirely, the demand for goods in other sectors of the economy will decline by a like amount, and we may presume that \$1,000,000 worth of secondary employment is destroyed. The process will continue until everyone is unemployed. (If the opposite set of reactions is emanating from the protected industries out-

ward, the two forces will cancel one another.) For reasons similar to those given above, however, such a drastic outcome is very unlikely. Unemployed people must live, and as long as they have available reserves of purchasing power, they will draw on these to maintain their expenditures. In the absence of reserves of their own, they will draw upon those of friends or relatives. Moreover, producers of goods for which the demand has declined may not cut down output proportionately. As a result of these forces tending to maintain the level of employment, the total reduction therein, instead of being infinite, will be some finite multiple of the initial decline. In the absence of evidence to the contrary, the figure may be estimated to be similar in magnitude to that which applies to an increase in expenditure. Under this assumption, the two sequences of events (the one operating toward expansion, the other toward contraction) will neutralise one another, and the net increase in employment will be zero.

But will the two sets of opposing forces operate independently of one another? Is it not probable that some of the expenditure of the newly-employed workers in the protected and related trades will be directed toward the export industries, serving to check the growth of unemployment at its source and thereby to effect a net increase in employment? Examination of the various possibilities indicates that only one set of conditions will lead to this result. If *all* the additional wages paid in the protected industries are spent, then just to the degree to which they are spent on the products of the export industries, the appearance of unemployment in the latter sector will be prevented, and to this extent will there be a net increase in employment. As we noted above, if all the new incomes are used to buy export products, workers in these industries will be enabled to continue to maintain their expenditures as usual, and no disturbance of equilibrium will occur.¹ The total new employment in the pro-

¹ Under equilibrium conditions, or better, under conditions of steady employment, the income of any group must be regarded as entirely spent (either on consumers' or on producers' goods) in the interval between successive receipts of income (i.e., with wage-earners, successive pay days). None of this income

tected industries will be a net figure. If only 10% of the new incomes is spent on export products, the decline in employment in the export trades will operate as a 90% offset to the increase in employment in the protected industries. Net new employment will be measured by the amount of new income devoted to sustaining employment among export workers.

If, on the other hand, not all the new income in the protected industries is spent,¹ then whether the proportion of expenditure diverted to the purchase of exports is large or small, no net increase in employment can result, provided the tendency to expansion set up by re-employment and the tendency to contraction set up by unemployment are of equal strength (*i.e.*, the positive and negative multiplier are of equal magnitude). For whatever is spent in maintaining export employment is no longer available to generate secondary re-employment in the home industries, while any unemployment developing in the export industries reduces employment-giving expenditure at the same rate that employment-giving expenditure elsewhere is increasing.

Thus, to take an example which represents what might reasonably be expected to happen, let us assume as before that \$1,000,000 formerly used to buy imports is used to furnish employment in certain protected industries, while at the same

will be held up permanently to add to hoards, since these will already have been established in accordance with the desires of the public in this regard. This income will circulate through the economy with a speed determined by the circuit velocity of money. It is only when there is a change in this circuit velocity (brought about by a change in the attitude of the public toward holding money) that any tendency toward expansion or contraction will be established, in the absence of an increase or decrease in total expenditure (such as might be brought about by a change in the rate of investment).

Again, under conditions of stable employment, there is no reason to expect that there will be any net repayment of bank loans. As fast as bank loans are repaid, new ones will be made to replace them. If we start with a condition of general unemployment, however, and assume a net increase in expenditure, not all of the new incomes generated will be passed on through the economy. The desire of the formerly unemployed workers to replenish their cash reserves, and the other sources of leakage described above, will reduce the net effect of the initial expenditure.

¹ *I.e.*, if there is any hold-up in the flow of new income, which in terms of the multiplier means that the latter is less than infinite.

time \$1,000,000 of employment in the export industries is extinguished. Suppose, as in our earlier illustration, half of the income received at each stage is spent, half is held up (the opposite being true in the export industries and in the succeeding stages), and that of the portion spent, 10% goes to buy export products. The distribution of the successive outlays resulting from the initial \$1,000,000 of increased income may be illustrated in columnar form as follows:

Stage	(1) Expansion in Income, Primary and Induced	(2) To Hoards, etc.	(3) Spent on Do- mestic Products	(4) Spent on Exports	(5) Diminution in Income, Primary and Induced
I	\$1,000,000	\$500,000	\$450,000	\$50,000	\$909,090
II	450,000	225,000	202,500	22,500	454,545
III	202,500	101,250	91,125	10,125	227,272
IV	91,125	45,562	41,006	4,556	113,636
V	41,006	20,503	18,453	2,050	56,818
VI	18,453	9,226	8,304	923	28,409
—	—	—	—	—	—
—	—	—	—	—	—
	\$1,818,181	\$909,090	\$818,181	\$90,909	\$1,818,181

NOTE: Column (1) represents the new income received at each stage in the flow of income; each entry is thus equal to the expenditure on domestic products in the preceding stage. Column (5) represents the extent to which the income of the community is reduced as a consequence of the shrinkage in exports (\$1,000,000 less \$90,909, the sum now spent on exports by newly-employed protected and other workers). Since half the increment in income at each stage in column (1) is assumed to be spent to provide employment, we must assume that the diminution in income at each stage in column (5) is half the preceding amount (*i.e.*, that those unemployed at each stage continue their expenditures at half the level attained when they were employed). The total diminution in income thus equals the total expansion in income.

The total effect of each sequence is shown by the figures at the bottom of each column. What is spent on exports reduces the multiplying effect on employment in the secondary industries, while at the same time it reduces the multiple of unemployment starting in the export industries by an identical amount. It is clear that the two sets of forces cancel one another.

Thus the diversion of some portion of the new incomes to expenditure on export goods simply means that the positive effects of initial new employment are reduced in the same proportion as are the negative effects of initial unemployment. Similar results will be reached whatever multiplier one assumes to operate (provided it is the same in both sectors), and whatever proportion of the successive outlays one assumes to be spent on exports.

The following general conclusion may be drawn from the foregoing argument: Provided exports and imports decline together, protection can do nothing to relieve unemployment, except to the extent to which the tendency toward expansion set up in the protected industries is stronger than the tendency toward contraction set up in the export industries. In terms of the employment multiplier, this must be larger in the former than in the latter industries if any net increase in employment is to result.

(ii) Imports Diminish, Exports Temporarily Sustained. — Consider now a situation which appears *a priori* more favorable to the relief of unemployment by means of protection: namely, where although imports decline sharply as a consequence of new duties, exports are sustained temporarily at their old level. The supply of foreign exchange will exceed the demand on commercial account, but we may assume the banks in the protecting country are willing to buy up this excess supply of foreign money to add for the time being to their foreign balances. In this event, there would appear to be a possibility that the initial decrease in imports will not be permanent. For although the first effect of the new duties is to cause the average individual to spend a smaller proportion of his income on imports, it is probable that with increased employment and income in the protected and related industries, total expenditure on imports (other than those newly protected) will be at least partially maintained.¹

¹ This argument is considered by R. F. Harrod in his *International Economics*, pp. 189-199. Mr. Harrod's conclusion, however, is rather more favorable than that arrived at below.

Barring a very considerable recovery in employment, however, it is most improbable that imports will be maintained at their old level. For as we have already indicated, only a small proportion of any increase in incomes will be spent on imported goods.¹ Thus if \$1,000,000 of expenditure formerly devoted to the purchase of imports is diverted to increasing employment in the protected trades, then with a multiplier of 2, the total increase in incomes will be \$2,000,000. Therefore if 10% represents the average proportion of income expended on imports, these will decline in value not by \$1,000,000 but only by \$800,000.

Unfortunately for this line of thought, however, it must be pointed out that just to the extent that expenditure out of newly-created incomes on home products is diminished, to that extent likewise is the favorable effect of such expenditure on employment decreased.² If 10% of this new income is diverted to the purchase of imports, then although imports will decline 10% less than might have been expected, the increase in home employment will also be 10% less.

Let us suppose, however, that this diminution of the multiplier has already been taken into account in determining its magnitude of 2. Then while new income and employment to the value of \$2,000,000 is generated at home, imports are likewise restored to the extent of \$200,000. Nonetheless, there still remains a decline of \$800,000 in the value of imports. Unless some outside force such as an increase of foreign lending permits their continuance, exports must also be expected to shrink by a like amount. As this shrinkage occurs, bringing in its wake unemployment in both export and home industries, the consequent extinction of incomes likewise brings about an extinction of demand for imports in direct proportion to the percentage (10%) formerly spent on imports. With a multiplier of 2, the decline of \$800,000 in export incomes means a total decline of incomes of \$1,600,000 and thus a

¹ This proportion will, of course, vary from country to country, being especially large in the case of such nations as England, which is to an unusual extent dependent upon foreign trade.

² On this point, see J. M. Keynes, *op. cit.*, p. 120.

reduction of the demand for imports by \$160,000. Exports will still further diminish, forcing an additional decline of imports, and so on in reciprocal relation, until the initial restoration of imports effected by the re-employment resulting from protection is wiped out. When this point is reached, the unemployment arising in the export and related industries will cancel the employment created in the protected industries.

Thus the only difference between the present and the preceding case (where exports were assumed to decline in step with imports) is a temporary one. For a period of time determined by the speed with which exports fall off from their initial sustained level, employment and incomes are increased by an amount which is at first considerable, but which gradually tapers off to nothing. We are therefore led to the conclusion that even in this more favorable set of conditions, protection is ill-adapted as a remedy for unemployment. For what appears to be at best a temporary gain, there is invoked a measure involving a decrease in the standard of living which, judging from the past history of protective duties, is almost certain to be permanent.

In all the foregoing discussion, we have assumed that in addition to the unemployment existing in the industries granted protection, there has also been a reservoir of unemployed in other industries. If the unemployment were confined to the newly-protected areas, with relatively full employment elsewhere, little secondary re-employment could be anticipated. The expenditure of the newly-employed workers would tend instead to bring about a general rise of prices. Recovery of imports would be very limited, and as a result exports would tend after the lapse of some time to decline sharply, with a consequent growth of unemployment in the export industries. Therefore in the situation to which it is most specifically adapted — limited unemployment consequent upon increasingly intense foreign competition — a tariff can be expected, even in the short run, to accomplish little. As with the situation just analysed, only temporary alleviation of the difficulty can be anticipated.

And this involves meeting the effects of industrial progress and change, not by seeking more efficient methods of production, or, if this is impossible, by necessary and perhaps painful internal readjustment, but by constantly rising tariff barriers which isolate the country affected. To follow this policy consistently would be perpetually to deny oneself the benefits of any increase in the international division of labor.

There remains for consideration one further and rather interesting possibility, a variant of the case analysed in the first part of this section. There we saw that a temporary increase in employment was to be expected. If this re-employment occurs in an environment of widespread cyclical unemployment, and if, moreover, business confidence is not in a state of complete collapse, it is possible that the expansion of income started by protection may provide just the needed stimulus to general business recovery. Expansion in the protected industries, passed on in the form of increased demands for the products of other industries and evoking increased incomes there in turn, may — if unaccompanied by a simultaneous decline of activity among producers of exports — be just sufficient to restore confidence and bring about a considerable increase of investment. The renewal of investment is what is required to overcome the depression. Thus protection might conceivably fulfill the "pump-priming" function of setting in motion the forces of recovery. This outcome is, however, very uncertain, for to cite only one obstacle, exports may well diminish before the favorable repercussions of re-employment in the protected trades are felt.¹ Furthermore, there are other measures, as public works expenditures, which are better suited as "pump-priming" devices, and which, moreover, do not involve a permanent fall in the standard of living.

(b) *Tariffs as a Means of Increasing the Share of Labor in the National Income.* — An interesting though not a very con-

¹ Worthy of serious consideration in this connection is the probability that other nations would retaliate against the increase in duties by imposing additional trade restrictions of their own. This would, of course, operate to wipe out all possible benefits of protection.

vincing case can be made out for protection as a means of increasing the share of labor in the national income.¹ To alter in its favor the distributive share of any factor it is only necessary either to increase the demand or to decrease the supply of the factor in question, relative to the demand or supply of the other factors. Owing to the fact that the productive agents are combined in different proportions in the various industries, any measure which brings about a shift in demand toward those industries where labor is used in relatively large amounts will increase the demand for and thereby the wages of labor.

In the case of labor-using products the demand for which is inelastic, a protective duty would appear to be an effective means of bringing about an increase in the demand for labor. Funds hitherto devoted to the purchase of the commodity from foreigners will be spent on a similar article produced at home. Moreover, if the elasticity of demand is unity or less, the same or a larger sum than that used to buy imports will be spent on the protected commodity. Exports will, of course, tend to decline; but unless they are produced by industries using an even greater proportion of labor than the protected trade, the total demand for labor will increase, and labor will get a larger share of the national income.²

It is necessary to make the foregoing specification with regard to elasticity of demand, for if it is greater than unity, the total sum spent on the protected article will be less than that formerly spent on the foreign product, and the difference may go to buy the output of predominantly capital- or land-using industries. So far as it does, the increase in the

¹ This argument for protection has been ably stated by Professor T. N. Carver (*Principles of Political Economy*, pp. 352-355). As Professor Carver points out, the tariff could be and in the past has been used to increase the relative return to other factors than labor, notably that to land.

² It will be recalled that any country tends to export those goods in whose production relatively large amounts of its most abundant (and therefore cheapest) factors are required. From this we may conclude that a country exporting commodities which are predominantly the products of labor would be ill-advised in adopting protection as a means of raising wages. For there is no possibility that a net increase in the demand for labor could thereby be brought about.

demand for labor is offset. Whether this neutralising effect is partial or complete (*i.e.*, whether wages rise, remain stationary, or fall) will depend upon the degree of elasticity of demand, the direction taken by that portion which is diverted, and the relative proportion of labor in the protected industry and in the other industries whose products are now purchased.

Although it must be admitted that if the requisite conditions with respect to elasticity of demand and the relative proportions of the factors in the export and the protected industries are met, this argument for protection has validity, there are two considerations which seriously impair its value as a possible guide to policy. First, it is by no means certain that if the demand for labor is increased, this increase will be anything more than temporary. For it must be remembered that capital, in the form of labor-saving devices, is a substitute for labor. If (money) wages are raised in the first instance, this may provoke an effective search for new methods of production, even leading in the end to a net decline in the demand for labor and to a diminution in its relative share. If the attempt to find new techniques is unusually successful, a wide field may be affected. All this means, of course, increased productivity. Even though the relative share of labor falls, industry may have become so much more productive that labor's absolute (real) income is larger. Which leads logically to the second consideration against protection to raise wages: namely, that even though the share of labor may be increased, its absolute amount may fall. This will occur if no advance such as that just suggested takes place. For protection diverts economic resources from more to less productive uses. Higher costs of production mean a lower total real income. This decline in total income may more than offset an increase in labor's share thereof.

It may be objected that in a free enterprise economy, the "productive" uses of the factors are merely those which are most profitable, that the factors may be allocated to industries which are not the most socially desirable or productive in the sense of creative of utilities.

It is of course true that private enterprise may avoid certain lines of activity (as, *e.g.*, the provision of lighthouses) because of the impossibility of exercising control over the disposal of the output. Or it may undertake the satisfaction of wants which may under certain conditions be socially disadvantageous (*e.g.*, liquor, narcotics), or wants may be satisfied by methods involving socially undesirable consequences (*e.g.*, the smoke nuisance, stream pollution). These problems, however, can be met by government enterprise or by the regulation of consumption or of production; they have little significant bearing on the question of tariffs.

When, on the other hand, it is urged that protection may result in a fuller satisfaction of wants (the creation of more utilities) than is possible under free trade, owing to the fact that there is no complete harmony of interests between the community and the individuals who control the allocation of resources,¹ something more fundamental is involved. For under free trade a nation's productive factors are directed into those lines in which (money) costs of production are lowest, and in which, therefore, the return to a given value of productive agents in terms of goods and services is greatest. These products are then exchanged for commodities which other nations can produce cheaper, with the result that the real income of the community is maximised. The very essence of protection is that it diverts resources from the export industries into high-cost lines of production. For a given value of the productive factors, a smaller quantity of goods and services is obtained under the shelter of protective duties than could be obtained were the same valuable collection of factors used to produce the same goods and services indirectly, by first producing exports. Real income, it must be repeated, is unquestionably maximised under conditions of the freest possible trade. To deny this is to deny the reality of the benefits of geographical specialisation.

What appears to be at issue here is a conflict between ends. If the desired goal is maximisation of income, it is impossible

¹ This argument is advanced by Professor Carver, *op. cit.*, pp. 355-361.

consistently to advocate protection. If, on the other hand, it is felt to be more important that, whatever the level of income, labor's share should be increased, protection is a perfectly consistent means to this end. Choice of this goal and this means, however, necessarily implies that the income to be redistributed will be smaller than otherwise. Whether labor's increased share of a reduced income will be an absolutely larger or smaller aggregate cannot be determined in advance; it depends on a host of relevant considerations. It is certain, however, that a protective tariff reduces the total available for distribution, while its operation as an instrument for altering the apportionment is highly uncertain, being contingent upon a number of essential conditions. Because of these considerations, the potential value of protection as a weapon of social policy to improve the lot of labor¹ cannot be regarded as very high.

(c) *Protection to Prevent Excessive Urbanisation.* — This is another aspect, sociological rather than economic in nature, of the case against specialisation. Thus Wagner, for example, viewed askance the great growth in Germany of an urban population, noting with concern the crowded slums and the unsatisfactory conditions in industry. He feared in particular a one-sided development of the nation, with an attendant loss of cultural values. Wagner reasoned that the maintenance and support by protection of a large agricultural class would conduce to a more wholesome life, more in accord with "the real economic, social, ethical, cultural and political interests of the entire community than the feverish activity of the purely manufacturing state."¹

This is obviously a type of argument with which the economist as such is incompetent to deal, since it postulates a social and cultural goal which is outside the scope of economic analysis. It would be the task of the social philosopher and statesman (ultimately the voter in democratic communities) to decide whether the "balanced" agricultural-

¹ Wagner, "The Agrarian State *vs.* the Manufacturing State," in Taussig's *Selected Readings in International Trade and Tariff Problems*, p. 343.

manufacturing economy is sufficiently desirable to warrant incurring the costs of agricultural protection. We must rest content with pointing out with Brentano that urban overcrowding and any ill effects of too rapid or "excessive" industrialisation on the health and lives of the workers can be more effectively and probably more cheaply counteracted by housing reform and other types of social legislation than by such indirect means as protection. If the stimulation of agriculture is judged to be independently necessary, bounties are at least as effective as duties and in addition their cost is definitely known and constantly realised by the tax-paying public.

(d) *Protection of Industries Essential to Military Defense.* — The argument that protection must be employed to maintain or establish industries supplying military necessities has been widely used, particularly in recent years. It is responsible for the "Key Industries" duties in England, introduced in the Safeguarding of Industries Act in 1921 on such articles as optical glass and instruments, scientific instruments, numerous chemicals, and a long list of other commodities, as well as for much of the urge toward autarky in Germany. Again, the relative importance of the national income and the national defense is a question for the statesman and the voter, not the economist, to decide. The economist can, however, indicate the superior advantages of bounties over tariff duties as a means of providing essential industries,¹ as well as other possible alternatives, such as additional expenditure on naval defenses to keep the sea routes open.

The foregoing are the main serious arguments for protection. The list is, however, not inclusive. Brief mention at least should be accorded two others. Of these, one urges

¹ Indeed, on grounds of justice, the advantage is all with bounties. If the avowed object of "key industry" protection is the support of national defense, the benefits of which accrue to the entire population, the maintenance, e.g., of the motor car industry should be paid for out of general taxation rather than by the consumers of automobiles.

For a fuller discussion of the issues involved in building up national defense, see Chapter XII, Part II, on Economic Nationalism.

tariffs as a means of restoring equilibrium in the balance of international payments, the other supports protection to encourage an importation of the means of production. The former, espoused by J. M. Keynes, was of special interest in Great Britain prior to that country's departure from the gold standard in 1931. The problem it aimed to solve — a continuing disequilibrium in the international accounts, with a constant pressure on gold reserves — was dealt with effectively by the abandonment of the gold standard. With regard to the latter argument, it must be admitted that protection can undeniably, by establishing opportunities for profit, stimulate the immigration of capital and labor. But unless the mere acquisition of these factors is to be regarded as an end in itself, there is no point to the argument.¹ For the national income is reduced by forcing the transfer of an industry from a more suitable to a less suitable location.

Of all the protectionist arguments considered, the only one with much real claim to attention is the infant-industry argument, and this one applies only under a very limited set of conditions and to certain specific industries. All the others rest their case on shaky foundations, offer a comparatively clumsy means of attaining their end, or must be hedged about with qualifications. Moreover, "the advantages . . . to be obtained by tariffs are either sectional if they are certain, or uncertain if they are general; in each case a strictly temporary gain, if any gain, is far more probable

¹ If the imports of capital and labor serve merely to multiply the number of inefficient industries, this is all that needs to be said on the subject. If, however, one goes further, and argues that in a young country the resultant growth of industry as opposed to farming, mining, etc. leads to rapid improvement in the means of communication, in provisions for general and technical education and other requirements of an industrial economy, in other words, that the inward movement of the factors brings with it various external economies which serve to lower costs, the argument is on a different footing. It becomes closely similar to the infant-industry argument, but like it, is applicable only to a young and undeveloped country.

For a fuller discussion of this argument, see Haberler, *op. cit.*, pp. 273-277. The reader who wishes a detailed account of the tariff as a means of influencing the international balance of payments should consult Chapter 7 in Beveridge's book; a briefer discussion is to be found in Haberler, pp. 269-273.

than a permanent one."¹ When it is used to remedy an emergency condition, protection involves, because of the vested interests it creates, the adoption of a permanent measure to cure a temporary difficulty.

If the case for protection is really so weak, why does it continue to find such wide acceptance? Why cannot free traders, by the very force of their argument, win over to their side a majority of voters in every land sufficient to cast aside this irrational delusion once and for all? The answer to such natural though naïve questions runs along common enough lines. As usual when reason and justice do not prevail in human affairs, investigation reveals that they are opposed by the interests of powerful groups, made palatable and even popular by skillful appeal to prejudice and to numerous but local selfish interests.

More specifically with regard to protection, there are three reasons which amply explain its predominance. In the first place, it is like a cancer: once started, it not only persists, but also tends to spread. Secondly, the case for protection, though in general based on fallacious reasoning, makes a strong popular appeal which the case for free trade in general lacks. Closely related to this is a third reason for the predominance of protection: namely, the superior vividness of sectional interests, served by protection, over the general interest.

The explanation of why a tariff both persists and spreads is simple. Originating in each country for different reasons,² tariff duties are maintained because they cannot be removed without serious injury to important groups, while the erection of a shelter over certain industries inaugurates a clamor for similar shelter for others.

Protection directs production into particular channels, breeds vested interests, shapes men's livelihoods. . . . Sudden removal

¹ Beveridge, *op. cit.*, p. 117.

² Thus it was the need of revenue during the Civil War that started the era of high protection in the United States, while List's arguments for infant-industry protection were a powerful factor in the establishment of the German Customs Union.

of a long-established high Protection, such as that of the United States, would cause dislocation, business losses and unemployment on a vast scale. . . . Once introduced, on however small a scale, it tends to grow and get established on a large scale. The benefit of Protection to the capital and labour engaged in an industry seeking Protection is immediate, direct and obvious. If Protection is granted to one industry, it is always difficult and often impossible to find reasons for refusing Protection to any other industry. If granted in any one industry, indeed, it tends to make Protection seem not merely equitable but necessary for others. There is hardly any product of one industry which does not enter, directly or indirectly, into the productive process of some other industry as raw material, or instrument of manufacture or transport, or basis of wages; if by Protection its price is raised above the world price, some other industry has its costs of production raised and gets a convincing special plea for its own Protection; this in turn affects other producers. The tariff grows like a snowball.¹

This enduring and cumulative quality of protection, once begun, in itself would suffice to explain its rapid spread. Numerous local interests are woven, one after another, into a far-flung web of organised and vociferous sentiment for protection. Yet its essential basis is strictly local; the general interest in attaining the highest possible standard of living still calls for the utmost freedom of trade. Why cannot citizens everywhere unite against local selfishness, put it to rout, and establish a commercial system that more fully promotes the national welfare? The answer to this question lies partly in the essential demagogery of the protectionist appeal and in the contrasting intellectuality of the free-trade case, partly in the relative vividness and directness of the sectional as opposed to the general interest.

Consider first the latter factor. The actual or supposed gain from protection is clear and immediate. Is a duty on sugar under consideration? Then the producer of sugar beets, the laborer in his fields, the worker in the refineries, and the merchants whom these people patronise can be shown that without a doubt they will benefit from the imposition of the duty. And under ordinary circumstances,

¹ *Ibid.*, pp. 114-115.

barring national emergencies, it is such direct and personal appeals that get the votes. Beside them, the argument that a contrary policy is most favorable to the general welfare seems unreal and remote. Who cares about the national interest when his own affairs are directly concerned? Moreover, who in practical politics — again under normal circumstances — cares about the national interest? The business of the politician is to get elected; if he can secure more votes by promising to care for selfish local advantage than by showing an intelligent understanding of broad national issues, he is in danger of committing political suicide if he adopts the cosmopolitan viewpoint. Again, the organisation of local interests is immensely strong. They have something at stake; they combine into powerful trade associations; they raise large sums to disseminate propaganda favorable to their cause. Who is to sponsor an opposing free-trade organisation? Consumers (who are notoriously inert), detached and busy college professors, a few disinterested individuals here and there.¹ It has been well said that the general interest is everybody's interest, and everybody's interest is nobody's interest. Finally, when the politicians, each elected primarily to advance sectional claims, get together in the national legislature, what should more naturally result than a swapping of votes, a process of "log-rolling," to ensure the realisation of election promises and the consequent predominance all-round of local selfishness.²

Re-enforcing the directness and immediacy of the protectionist as contrasted with the generality of the free-trade

¹ Those individuals in the community who are actively engaged in or connected with foreign trade — importers, exporters, shippers, international bankers — will, of course, tend to favor freer trade. In most communities, however, and particularly in the United States, they are numerically much weaker than the business interests which favor protection. If and when they become powerful, we may expect to witness a low-tariff movement of some vigor.

² An amusing and vivid illustration of this process is given in "Tariff for Politics Only," a quotation from Peter Finley Dunne, cited in *Problem Economics* by Keezer, Cutler, and Garfield. For a serious discussion of the practice of tariff-making, see Beveridge, *op. cit.*, Chapter XV, and T. W. Page, *Making the Tariff in the United States*.

cause is the related demagogic nature of the former, the intellectual character of the latter. It is no accident that advocates of protective tariffs ordinarily use, in advancing or defending their position, not their most respectable (and most narrowly limited) arguments, but those containing the greatest percentage of fallacy. For these popular fallacies *are popular*: they are plausible; they are easily understood by the dullest intellect; they are free from any taint of academic refinement. Moreover, they appeal to innate ignorance, to sectional prejudice, to nationalistic bias. Contrariwise, the free-trade case is unspectacular, unemotional, primarily reasonable, and therefore unpopular. To grasp it thoroughly, let alone understand all its implications, requires a considerable degree of economic literacy, a quality possessed by comparatively few in any population. Small wonder then, in view of this and the foregoing related considerations, that the cause which has the most to be said for it succumbs to that for which the most is said and done

SUGGESTED REFERENCES

Encyclopaedia of the Social Sciences, "Protection," article by Eli F. Heckscher.

Haberler, Gottfried von, *The Theory of International Trade*, Chapters XVI, XVII, especially on tariffs and unemployment, or Schüller's peculiar arguments with respect to a supposed increase in production under protection, and on the import of means of production.

Beveridge, Sir William, *Tariffs: The Case Examined*, especially Chapters VII, XII, and XV.

Taussig, F. W., *Free Trade, the Tariff and Reciprocity*.

Taussig, F. W., *Some Aspects of the Tariff Question*, Chapters II-III.

Graham, Frank D., *Protective Tariffs* (Harper and Bros., New York, 1934).

Crompton, George, *The Tariff* (The Macmillan Co., New York, 1927).

Griffin, C. E., *Principles of Foreign Trade*, Chapters XX, XXIX.

Carver, T. N., *The Principles of Political Economy* (Ginn & Co., Boston, 1919), Chapter XXIX.

Patten, S. N., *The Economic Basis of Protection* (Lippincott, Philadelphia, 1895, second edition).

Boswell, James L., *The Economics of Simon Nelson Patten* (University of Pennsylvania, Philadelphia, 1933), Chapter X.

Orchard, John E., "The Social Background of Oriental Industrialisation: Its Significance in International Trade" (Chapter XII, Part I, of *Explorations in Economics*).

Whale, Barrett, *International Trade*, Chapter VI.

Harrod, R. F., *International Economics*, Chapter IX.

Cohn, David L., *Picking America's Pockets* (Harper & Bros., New York, 1936).

Page, T. W., *Making the Tariff in the United States*.

Schattschneider, E. E., *Politics, Pressures and the Tariff* (Prentice-Hall, Inc., New York, 1935).

CHAPTER VI

TARIFFS AND ADMINISTRATIVE PROTECTION

THE five preceding chapters have dealt with considerations relating to the issue of free trade *versus* protection, including a somewhat technical discussion of the economic effects of customs duties. Their primary concern has been to weigh the relative merits, from the social point of view, of these alternative trade policies, and in particular to appraise a rather wide range of specific arguments advanced in support of protection. We have found that the general case for free trade is incontrovertible, and that, granting the desirability of maximising the national income, there are no valid arguments for a general policy of protection, but only for its application in certain special and rather narrowly limited situations.

Having gained some understanding of the social significance of liberal and restrictive policies, we are now in a position to examine how a commercial policy, once determined, is implemented. The next four chapters, therefore, are devoted to a consideration of the technique of commercial policy. First, the older devices of protectionism, namely tariffs and administrative measures, are reviewed. Next we examine the methods by which the economic relations of any nation with other particular countries are regulated. This involves a study of various types of commercial treaties and certain methods by which the terms of these treaties are altered. Finally, in Chapters VIII and IX, some of the more recent and more drastic forms of restriction and intervention are surveyed.

TARIFFS

(a) *Customs Duties and Customs Areas.* — Customs duties are the raw materials of tariffs. They may be defined as taxes imposed on goods entering (import duties) or leaving (export duties) a customs area. Usually, though not always, a customs area and the territory of a nation are identical. Thus with the minor exceptions of the Philippine Islands, the Virgin Islands, Samoa, and Guam, the customs area of the United States includes not only all the states but also all the territory under its sovereignty. Likewise Great Britain and Northern Ireland comprise a unified customs area, though the little Isle of Man has a separate schedule of duties. On the other hand, by customs unions or customs annexations, two or more countries may be united for purposes of customs administration. Thus the separate German states were joined in a customs union from 1828 until the formation of the Empire in 1871, as were the component parts of the Union of South Africa prior to their unification in 1909. At the present time Luxemburg and Belgium are partners to a customs union. The principality of Monaco exemplifies a slightly different form of customs unification, that of customs annexation. Since 1865 it has been annexed to France for customs purposes, while Liechtenstein was before the War a part of the Austrian and has since 1923 been a part of the Swiss customs area.

Of the two types of customs duties, those on imports and those on exports, export duties are today comparatively unimportant. In the past they were widely used, especially in the Middle Ages, when their object was not so much revenue as the safeguarding of domestic supplies. Today, however, export duties are principally confined to products of which one or two suppliers have a virtual monopoly (as Spain and Portugal of cork, Bolivia and the Malay States of tin), when they may be levied as an effective revenue measure without serious injury to producers. Occasionally export duties are protective in purpose. This is the case with the Swedish

and Norwegian taxes on exports of forest products, which aim at encouraging milling and paper manufacture at home. Switzerland's export duties on cattle, hides, and skins serve as a protective measure for her leather industry. Again, taxes on exports may be used as a mean of controlling the volume of export sales with a view to maintaining the world price of the taxed article. A sliding scale of export duties with this end in view has been part of the rubber restriction scheme in force in the Malay States and the Dutch East Indies.

A number of illustrations of export duties has been given and others are available. Nonetheless, as compared with taxes on imports, the total number of export duties is infinitesimal. With a few important exceptions, customs duties may be regarded as consisting of import duties.

Customs duties may have as their object either the provision of revenue or the protection of home industries; but there is no clear line of demarcation, since many duties that are protective in effect are very important as producers of revenue, while supposedly pure revenue duties may on occasion furnish some measure of protection. Revenue duties, however, are usually levied on commodities capable of being produced at home only with great difficulty (*e.g.*, tea and coffee in European countries), and at a rate which offers little if any stimulus to domestic production. Protective duties, having as their main object the restriction of imports, tend to be relatively high.

Import duties, whether for revenue or for protection, may be levied according to either of two bases. If they are calculated as a fixed percentage of the price of an imported article, they are known as *ad valorem*;¹ if they are levied as a fixed number of cents or dollars per physical unit (pound,

¹ Various possibilities exist with respect to the valuation of the imported article to which an *ad valorem* duty is to be applied. The import value (value in the importing country), the export value (value in the exporting country), or an official value (arbitrary) may be used. Since import values will ordinarily be higher than export values, their use will provide a greater measure of protection. The clamor in this country for the use of "American Valuation" is merely a thinly disguised effort to secure additional protection.

gallon, yard, etc.), they are called *specific* duties. Sometimes the two are combined in mixed or compound duties. Thus under the Tariff of 1930, cigars and cigarettes coming into the United States are dutiable at a rate of \$4.50 per lb. plus 25% ad valorem.

Each type of duty offers some advantages and some disadvantages. Ad valorem duties fall with equal weight on the crude and on the finished forms of a particular commodity. Their burden also remains the same in the face of price fluctuations.¹ In addition, they are easy to understand, and facilitate international comparisons of the height of particular duties. Their chief disadvantage arises from the necessity of placing a value upon each commodity subject to duty. These values are never definite;² they must be determined by the customs officials by methods that are always difficult, generally uncertain, and that provide a constant temptation to evasion. The declared value must always be checked against the price in the exporting or the importing country. This price is frequently subject to sudden fluctuations and often varies with the credit rating of the buyer, the volume of his purchases, and the quality of the goods.

Specific duties, on the other hand, are much easier to assess, since it is merely necessary to count, measure, or weigh the commodity in question. A given duty bears more heavily, however, on the cheaper grades of any product, while

¹ Ad valorem duties provide a constant degree of protection, however, only if changes in the price of the commodity take place at the same rate at home and abroad. Suppose a commodity selling for \$1.00 in the United States and \$0.80 at the port of export is subject to a 30% duty on the export value. Ignoring transport costs, delivered imports will then cost \$1.04. If the price both at home and abroad falls by 50%, the delivered import price becomes \$0.52, or 4% above the price of the competing American article. If, however, the American price had fallen by 60% (to \$0.40) as against a 50% decline abroad (to \$0.40), the protective margin becomes not 4% but 30%. Conversely, were the foreign price decline greater than in the United States, the degree of protection is lessened. With a 50% drop in the export price but only a 40% decline here (to \$0.60), the delivered import price is 13½% below the American price.

² Except, of course, where a purely arbitrary official valuation is used, in which case an ad valorem duty becomes in effect, relative to the actual import or export price of a commodity, a specific duty.

its burden in terms of the value of the good varies inversely with changes in its price. To avoid the first difficulty, a minute and elaborate classification according to the different stages of manufacture must be adopted, a procedure which enormously lengthens and complicates the schedule of duties. Moreover, this solution introduces the possibility of dispute as to the proper classification of any particular import. The second difficulty, variability of the burden as the price of the dutiable article changes, can be met only by constant change of the specific rates of duty. This is a step which involves endless labor and which throws the whole question of the tariff into the arena of partisan politics.

In view of the foregoing considerations, it would appear that a compromise in the use of these two types of duties offers a means of avoiding some of the disadvantages of both. Thus standardised articles, such as wheat, cotton, and pig-iron, which are susceptible to easily identifiable classification, lend themselves especially well to the imposition of specific duties, while those having a wide range of constantly changing qualities, such as manufactured articles, are particularly suited to ad valorem duties. Many countries, including the United States, have adopted such a compromise in varying degree. In general, however, the United States, Great Britain and the British Dominions, and some South American countries rely principally upon ad valorem duties, while most European nations and some of Latin America make use predominantly of specific duties.

(b) *The Structure of a Tariff.*—A customs tariff is a list of commodities (tariff nomenclature), classified according to some system, together with a schedule of the rates of duty charged. Various bases of classification are possible. Thus commodities may be arranged alphabetically, according to the class-rate of duty (over 100%, 90% to 100%, etc.), according to the particular statutes imposing the duties (as in Great Britain), or according to the attributes of the commodities. All these methods are used, though the last-named is the commonest. Under this type of classification,

goods may be listed as to their stage of manufacture (raw materials, semi-manufactures, finished manufactures), as to their derivation (animal, vegetable, or mineral products), or in line with some other technical distinction. Thus the United States tariff of 1930 possesses sixteen classes or schedules of different types of commodities, with the articles under each class arranged in many different ways, such as alphabetical, according to use, stage of manufacture, etc.¹

The number of individual commodities in a tariff (the tariff nomenclature) is determined by a detailed description of each commodity, called "specialisation." This process of specialisation or enumeration results in the establishment of a bewildering nomenclature, some of the individual commodities differing from others only in minute particulars. Both the French and the American tariffs of 1930 contain some 7,000 separate items. Most tariffs, in addition to the nomenclature of individually specified articles, contain catch-all clauses to cover commodities incapable of separate enumeration.

Because of the wide diversity in the classifications and nomenclature of the tariffs of different countries, a diversity which renders international comparison particularly difficult, the adoption of a uniform procedure in these matters would be highly desirable. An effort toward this end has been made by the League of Nations, whose Economic Committee in 1927 appointed a subcommittee of experts to study the matter. Its report on Draft Customs Nomenclature, submitted in 1931, comprised 21 sections covering 2,314 items in 991 sub-sections. The recommendation that its more important provisions be adopted by League members has so far met with no response.

¹ The sixteen schedules of the American tariff are as follows: 1. Chemicals, oils, and paints; 2. Earths, earthenware, and glassware; 3. Metals, and manufactures of; 4. Wood, and manufactures of; 5. Sugar, molasses, and manufactures of; 6. Tobacco, and manufactures of; 7. Agricultural products and provisions; 8. Spirits, wines, and other beverages; 9. Cotton and manufactures thereof; 10. Flax, hemp, and jute, and manufactures of; 11. Wool, and manufactures of; 12. Silk manufactures; 13. Manufactures of rayon or other synthetic textiles; 14. Papers and books; 15. Sundries; 16. Free list.

Accompanying the names and descriptions of dutiable commodities is the schedule or schedules of duties — specific, ad valorem, or mixed — which make up the tariff. The number and character of these duty schedules determines the kind of tariff in force, a rather important matter to whose elucidation we may now proceed.

(c) *Kinds of Tariffs.* — Tariffs may differ as to the number of schedules of duties they contain or as to the way in which the duties are established. When the customs duties are fixed by legislation and not by agreement with other countries, the tariff is known as autonomous; when they are established by treaty or agreement with other powers, the resultant tariff is called conventional. With respect to the number of duty schedules, there are single tariffs, double tariffs, and multiple tariffs. A single tariff, as the name implies, consists of a single schedule of duties applicable to all imports regardless of their source. It is ordinarily used where revenue is the sole object (Great Britain before the War), or for protection when the country has no intention of bargaining (recent American tariffs). Such a tariff may be either autonomous or conventional.

The double tariff has two important variants. In the so-called maximum-and-minimum tariff, both schedules of duties are established autonomously, with the minimum rates granted totally or in part to specific countries by agreement, the maximum rates applying to all others. France and Belgium both possess this type of tariff, with the difference that France regards the maximum duties as normal, the minimum duties as especially favorable treatment, while Belgium treats the minimum duties as normal, reserving the others as a threat in bargaining or as a penalty for discrimination. In the other type of double tariff, the general and conventional tariff, the general duties are established autonomously by domestic legislation; the conventional duties are arrived at by agreement with other countries. Any country which has no such agreement is subject to the general schedule. French tariffs were of this sort prior to 1892, while Germany has used them since that time.

Both types of double tariff have been popular in European countries because of their apparent adaptability to bargaining for concessions. With two countries playing the same game, however, each with one form or another of the double tariff, any concessions either might gain would almost certainly be insubstantial. For the minimum rates in the maximum-minimum tariff have always been set high enough to give the desired protection, while the general rates of the general-conventional tariff have been fixed so high that even after large reductions have been made in the course of tariff negotiations, the rates remain amply protective.

Multiple tariffs are those containing more than two, usually three, schedules of duties. The tariffs of Canada, Australia, and New Zealand are multiple and autonomous, providing for three rates of duty: British preferential, intermediate, and general. The preferential rates apply to products of the British Empire, the intermediate rates to imports from countries with which agreements have been concluded, the general rates to all other imports.

(d) *The Measurement of the Height of a Tariff.* — Attempts are frequently made to measure the height of a tariff, principally for the purpose of making international comparisons. The task is intrinsically difficult, however, owing to the fact that a tariff is not, like a wall — even one of varying height — something whose average height can be simply measured. The analogy cannot be pushed very far, but since it is frequently used, it would be better to say that a tariff is like a series of discontinuous walls with important gaps between them and with some sections of the separate walls rising so high as to be immeasurable.

In spite of the difficulty of attaching a clear, specific meaning to the concept, numerous attempts — most of them fatuous — have been made to compute a measure of tariff walls. Thus in an effort to belittle the restrictive effect of American customs duties, protectionist politicians have frequently cited the fact that some two-thirds of our imports enter the country free of duty, or, conversely, that about a

third of our imports are dutiable. Such statements overlook completely the fact that the higher a duty schedule rises, the less will be the volume of dutiable imports. If all our duties were prohibitive, while some few and unimportant items were still left on the free list, then 100% of our imports would be duty-free! Slightly less naïve but still subject to the same objection is the method, frequently used, of calculating the percentage relationship between total customs receipts and the total value either of all imports or of dutiable imports. Again, prohibitive duties are excluded from the reckoning. Any measure of the "height" of a tariff which thus ignores prohibitive duties is guilty of computing the level of only the lower portions of the tariff "wall."

A more defensible method is to convert all duties into ad valorem figures, then to calculate the average of these for all dutiable commodities (or for a representative sample of dutiable commodities, including a due proportion of those subject to prohibitive duties). Even such a measure, to be significant, requires that the component figures be weighted in accord with the relative importance of the different commodities, since it is obvious for example that a duty on wheat is many times more important than a duty on birdseed.¹ Moreover, as we saw in an earlier chapter, the prices of all dutiable commodities except those produced under conditions of constant costs will be affected by tariffs, even in the exporting countries. This means that the real burden may be greater or less than would appear from an ad valorem figure. Finally, as Haberler points out,² there is the question of what it is the height of which we are trying to measure. Is it the degree of protection afforded to domestic industry? But

¹ The necessity of including prohibitive duties, if the index is to be representative, rules out the possibility of weighting the various duties in accord with relative imports, since there are no imports of goods subject to prohibitive duties. This consideration would force the use of another system of weighting, such as the comparative importance of each dutiable commodity in the total of world trade.

² *Op. cit.*, p. 358. For an excellent and more elaborate discussion of the whole problem of measuring the height of a tariff, Haberler's book should be consulted.

the same *ad valorem* rate of duty will provide only partial protection to one country, more than ample to another, depending upon cost conditions in the two regions. If our tariff index is to measure the relative degree of obstruction to imports, it may be necessary, as Haberler suggests, to construct a separate index for each country from which goods are imported, since the tariff of any nation may restrict imports from some countries severely, those from others only slightly or not at all. About all that we can be sure of obtaining from even a carefully constructed index, unaccompanied by an explanatory statement, is a summary and rather vague impression of the liberality or illiberality of its trade policy.

ADMINISTRATIVE PROTECTION

A form of protection almost universally used as a supplement to tariffs is indirect or administrative protection. It is an exceptionally difficult concept to define. In fact, it is merely a catch-all term designed to cover a wide variety of practices which are protective in effect. From the negative point of view, administrative protection may be said to include all official protective expedients that cannot be otherwise classified. Thus it consists of all measures other than tariffs, import quotas and prohibitions, subsidies, and exchange control. Positively expressed, it comprises a host of specific protective devices which are characteristically underhanded, devious, and deceptive in their outward form. More often than not these are a result of the way in which the law is enforced by administrative officials, though they may be established in the law itself. Outstanding among the numerous media of this type of protection are veterinary and sanitary regulations, marks of origin requirements, arbitrary and discriminatory tariff nomenclature, oppressive customs formalities, arbitrary valuations, and preferential railway rates.

The exact nature of administrative protection may best be made clear by means of a number of illustrations. As an

example of the diversion to protective uses of sanitary regulations we may cite the Austrian laws for the safeguarding of consumers against unwholesome food. Their extreme complexity, the variable rigor of their enforcement, and their frequent alteration combine to render very difficult the importation of food products into Austria. The mark of origin requirement has often been enforced with great arbitrariness in the United States. Thus there is the case of the far-fetched interpretation of this provision by the Customs Court with respect to cigarette papers, when it was insisted that not each package but each single paper was an individual article and hence to be marked separately with the name of its country of origin.¹ The classic example of the distortion of tariff nomenclature by excessive "specialisation" is to be found in the reduction in duty granted in the pre-War German tariff to "large dappled mountain cattle or brown cattle reared at a spot at least 300 metres above sea level and which have at least one month's grazing each year at a spot at least 800 metres above sea level,"² a provision obviously designed to confine the duty reduction to imports of Swiss and Austrian cattle.

Illustrations could be multiplied, but these will suffice. New forms of administrative protection are constantly cropping up, since under a government which is partial to such a policy, almost any law affecting commerce can be applied in such a way as to hinder imports. This makes impossible the compilation of a complete list of these practices, let alone the exhaustive definition of the subject.

Administrative protection thus appears as a ready means by which a group in control of a government can turn an apparently liberal policy into a protective one, or a protective policy into a more rigorous one. Commercial policy as embodied in legislation may be distorted and even nullified without the necessity of acquiring a popular mandate. Moreover, owing to the concealed nature of this form of

¹ This and the preceding example cited by E. M. Winslow.

² Cited in Paranagua, *Tariff Policy*, p. 84.

protection, it provides as well a means of discriminating between different foreign sources of supply. In this respect, it has to a considerable extent counteracted international efforts (as embodied in the most-favored-nation policy) to ensure equality of treatment.

Because the devices of administrative protection lend themselves to discriminatory use, and because their evasiveness, uncertainty, and sometimes downright trickery engenders ill-will, suspicion, and retaliation, the world would obviously be better off without them. Until, however, there is a change of heart among nations in favor of increased liberalisation of trade, there would appear to be little hope of bringing about such a good riddance. Because of their very inconspicuousness and indirection, measures of administrative protection furnish a most flexible instrument of policy, requiring for reform a change in inner conviction rather than an attempt to secure international agreement.

In addition to the administrative acts just described, another quite different form of indirect protection, one which might be called informal protection, is to be found in many countries. This is the popular boycott of foreign products. Such boycotts, as in the "Buy British" campaign of recent years in Great Britain, may be officially sponsored by the government, or they may develop spontaneously among the people or certain groups thereof, as the widespread boycott of Japanese goods in 1937-38 and the anti-Nazi boycott of German imports in many countries in 1933-34. These instances also illustrate on the one hand a comparatively mild pro-national rather than anti-foreign type of propaganda effort, and on the other, one directed at the goods of a particular country and accompanied by strong emotion. Such movements may be extremely effective in restricting imports. Except where sustained by direct government action, however, they are apt to be sporadic and short-lived. The widespread boycott of Japanese products brought about by Japanese aggression in China appears to be somewhat unusual in this regard.

Similar in nature though probably less effective in results is a type of activity which has had some vogue in the United States in recent years — the use of advertising by particular trade groups, with the object of prejudicing potential customers against foreign wares and in favor of their own. As an example, we may cite the nation-wide advertising campaign carried on a few years ago by American beet-sugar producers, stressing the employment provided by the industry and appealing to patriotic sentiment. During 1937 a campaign was conducted by Hawaiian cane-sugar growers, attempting to generate a feeling that the Hawaiian Islands are an integral part of the United States and thereby to forestall any attempt to exclude Hawaiian sugar from the free list. Finally, one should not fail to mention the regular outpouring of protectionist propaganda by the Chemical Foundation, an organisation which has gone to great expense in its task of flooding the country with misinformation.

SUGGESTED REFERENCES

Encyclopaedia of the Social Sciences, article on "Customs Duties" (Joseph Grunzel); article on "Tariff" (Jacob Viner).

Paranaguá, O., *Tariff Policy* (Oxford University Press, 1935).

Gregory, T. E., *Tariffs: A Study in Method* (C. Griffin & Co. Ltd., London, 1923).

Haberler, Gottfried von, *The Theory of International Trade*, Chapter XIX.

Smith, Mark A., "The United States Flexible Tariff"; Part I, Chapter XVI, in *Explorations in Economics*.

Winslow, E. M., "Administrative Protectionism: A Problem in Commercial Policy"; Part I, Chapter XVII, in *Explorations in Economics*.

CHAPTER VII

COMMERCIAL TREATIES AND TARIFF BARGAINING

COMMERCIAL TREATIES

A COMMERCIAL treaty is simply a contract between two nations with respect to any part of their economic relations, chiefly commercial.¹ While a formal treaty is usually quite a formidable document, duly ratified according to the constitutional practice of the contracting parties, the same matters may be covered in a less formal agreement or by a mere exchange of notes between the respective governments. Different treaties and agreements vary widely both in scope and duration, though in general the more informal instruments are confined to a narrower range of topics.

These international contracts may apply to any aspect of the commercial relations between the two parties in which either one of them is interested. Broadly speaking, the numerous matters relating to trade, navigation, taxation, travel, industry, etc., covered in a treaty may be grouped into two main categories: the rights granted to citizens and the treatment accorded to the goods of each contracting party. Each of these two groups of topics may be handled in either of two ways: the direct or the indirect. According to the direct method, the rights of citizens and the treatment

¹ There are a few instances of multilateral treaties, signed by more than two countries. These international conventions, as they are generally called, have dealt with a rather limited range of topics, such as posts, aviation, sanitation, sugar bounties; though in the years immediately following the War, under the leadership of the League of Nations, conventions were concluded covering transit trade, customs formalities, and the transmission of electric power.

of commodity imports are specified in great detail in the treaty. Under the indirect method, these matters are covered by some general rule. Of the various possible general rules which have from time to time been invoked, those most widely used in modern times are national treatment and most-favored-nation treatment.

(a) *National Treatment.* — As its name implies, this rule of conduct simply means that each contracting party guarantees nationals of the other the same treatment it accords to its own citizens. Naturally, since the very object of tariff and other forms of trade restrictions is to subject the goods of other countries to worse treatment than is accorded one's own products, the rule applies only to the civil and commercial rights of individuals. While treaties rarely if ever contain the words "national treatment," this term accurately¹ sums up the meaning of the relevant clause.¹ Exceptions to the rule, though not numerous, are found in most treaties. Thus the United States confines to its own citizens the right to engage in coastwise trade, while other countries apply similar restrictions to national fisheries and to certain professions.

National treatment is the rule nowadays between equals, but when one power is in a position of dominance it may exact from the weaker power some form of special privilege. Thus all the important powers except Russia, Austria, and Germany possess so-called extra-territorial rights in China, which means that their nationals are subject, not to Chinese laws, but to the laws of their homeland, and are tried in special courts within each nation's separate jurisdiction.

(b) *Most-Favored-Nation Treatment.* — This term is rather misleading. The purpose of the most-favored-nation clause is not to give any nation a most favored position, but to

¹ "The subjects or citizens of each of the two Contracting Parties shall have liberty freely to come with their ships and cargoes to all places and ports in the territories of the other to which subjects or citizens of that Party are; or may be, permitted to come and shall enjoy the same rights, privileges, liberties, favors, immunities, and exemptions, in matters of commerce and navigation, as are or may be enjoyed by subjects or citizens of that Party." (Article I of the Treaty of Commerce and Navigation between Finland and the United Kingdom of 1923.) Cited in *Paranaguá, Tariff Policy*, p. 162 n.

ensure to each contracting party as good treatment as is granted to any other country. W. S. Culbertson rightly suggests that it might better be called the "equally-favored-nation clause." Specifically, most-favored-nation treatment extends the same commercial favors to the nation in question as are granted to any third country. The clause may cover all matters relating to commerce, industry, and navigation, including both the rights of persons and of goods, or it may confine itself to the treatment of commodities or to customs duties alone.¹ Frequently national treatment of persons is combined with most-favored-nation treatment of goods.

Ordinarily, the most-favored-nation clause is bilateral in its operation; that is, it applies to each of the two contracting parties. Sometimes, however, a dominant power may insist upon its unilateral application. Thus in the post-War treaties, Germany, Austria, Hungary, and Bulgaria temporarily granted unilateral most-favored-nation treatment to the Allies, but themselves received discriminatory treatment.

Two forms of most-favored-nation treatment (bilateral) must be distinguished: the unconditional and the conditional. Under the unconditional form, any advantage granted by either contracting party to a third country accrues automatically and without compensation to the other party. Thus if a treaty between A and B contains the unconditional most-favored-nation clause, any reduction of duties, for example, which may be granted by either A or B to some third country immediately becomes applicable to the other party to the treaty.

¹ An example of the broadest type of coverage is to be found in the Treaty of 1911 between Great Britain and Japan: "The High Contracting Parties agree that, in all that concerns commerce, navigation, and industry, any favor, privilege, or immunity which either High Contracting Party has actually granted, or may hereafter grant, to the ships, subjects or citizens of any other State shall be extended immediately and unconditionally to the ships or subjects of the other high Contracting Party, it being their intention that the commerce, navigation, and industry of each country shall be placed on the footing of the most favored nation." Cited in Paranaguá, *Tariff Policy*, p. 165 n., where there also appears a quotation from the Convention of 1904 between Russia and Germany limiting most-favored-nation treatment to "the products of the soil or of the industry" of either country.

Under the conditional form of most-favored-nation treatment, either contracting party must extend to the other party any favor granted to a third country, *provided* the same conditions are met. That is, the conditional form distinguishes between concessions gratuitously made and concessions purchased for a price. Only gratuitous concessions are extended automatically and without question; all others must be paid for with an equivalent concession.¹

European nations have since the middle of the nineteenth century quite generally adopted the unconditional form of most-favored-nation treatment. The United States alone, from the date of its first treaty with France in 1778 down to 1923, consistently adhered to the conditional form. During the nineteenth century, when our exports consisted chiefly of staple foods and raw materials, this interpretation was believed best suited to success in bargaining for concessions. With the growing importance of manufactured exports, with respect to which a guarantee of equality of treatment is perhaps more important than a grant of special concessions, and in the face of constant difficulty in applying the conditional interpretation, it gradually became apparent that the unconditional clause offered many advantages. Suddenly, in an exchange of notes with Brazil in 1923, the government of the United States abandoned its previous policy and agreed to accept the unconditional clause. Since that date it has continued to be a vigorous supporter of this interpretation.

There is little doubt that the unconditional has much to recommend it over the conditional form of most-favored-nation treatment. It is perfectly definite; it requires no

¹ The Treaty of 1911 between the United States and Japan provides a typical example of the conditional interpretation: "Except as otherwise expressly provided in this Treaty, the High Contracting Parties agree that, in all that concerns commerce and navigation, any privilege, favor or immunity which either Contracting Party has actually granted, or may hereafter grant, to the citizens or subjects of any other State shall be extended to the citizens or subjects of the other Contracting Party gratuitously, if the concession in favor of that other State shall have been gratuitous, and on the same or equivalent conditions, if the concession shall have been conditional." Cited in W. S. Culbertson, *International Economic Policies*, p. 61.

elaborate diplomatic wrangling for its interpretation; it generalises equality of treatment in the simplest possible manner and thereby eliminates potential sources of conflict. On the contrary, the conditional clause is subject to constant misinterpretation or necessitates frequent negotiation to determine just what its application should mean. What is an equivalent concession? If A reduces its duty on wool in return for a reduction of B's duty on wines, A must extend the same reduction in the wool schedule to C provided the latter makes an equal cut in its wine duties. Is C's concession equivalent to B's, regardless of the possibility that C may be a negligible importer of wines? Or suppose that wines are on its free list — what duty reduction is to be regarded as establishing an equal concession? The solution of such problems, while difficult and provocative of friction, is not impossible. Often, however, each party to a treaty will make several concessions simultaneously, only the sum total on each side being regarded as roughly equivalent. Both the necessity and the difficulties of bargaining with third powers then become enhanced many fold. Moreover, as Professor Viner has pointed out, if a given country has negotiated even one unconditional most-favored-nation treaty with some other nation, this "makes the conditional clause in other treaties in effect unconditional. For once concessions granted conditionally to some other country have been extended gratuitously to this one country, they can be claimed gratuitously by all other countries."¹ Finally, it should be clear that the grant of conditional most-favored-nation treatment, except so far as it generalises gratuitous concessions, virtually promises merely the right to bargain for equal treatment. The degree of equality attained still remains to be determined in the course of bargaining, where political and economic power are all-important. Truly equal treatment, the basic objective of the most-favored-nation clause, can be achieved only through adherence to the unconditional interpretation.

¹ Cited by Whale, *op. cit.*, p. 216 n.

Before leaving the topic of most-favored-nation treatment, it is necessary to call attention to certain exceptions to its provisions which are rather generally recognised. Of these the most common is frontier traffic of a strictly local character. Since the boundaries between countries frequently divide regions which are economically homogeneous, such as the great plains of eastern Hungary and western Rumania, and since the interruption of local trade through the application of uniform customs duties might work serious hardship to inhabitants along both sides of the frontier, exemption of this type of traffic from the usual import duties is quite common. Again, most colonial powers expressly reserve the right to give special treatment, usually in the form of preferential duties, to colonies or possessions which are not incorporated into the customs area of the mother country.⁶ Of such arrangements, the best known is the system of preferential duties adopted by Great Britain and her Dominions at the Ottawa Conference of 1932. Exceptions to most-favored-nation treatment have also been made with respect to certain countries which are closely related as to location, race, or economic ties. Thus the United States and Cuba, in their treaties with other countries, specifically exclude them from the enjoyment of certain duty reductions which they have granted one another in a reciprocity treaty. Similar exceptions apply to the trade between some Central and South American countries, Spain and Portugal, the Scandinavian countries, the Baltic States, and a few others. Customs unions may be cited as a special instance of this type of exception.

Whether the commercial relations between countries are regulated in the direct manner, with detailed specification of each individual matter or by the indirect method of invoking such general rules as national or most-favored-nation treatment, in either case the terms agreed upon must be put down in black and white in some more or less formal document. This is necessary because there is no generally recognised body of international law, other than certain customs of a

rather indeterminate status, to which nations, like individuals within each state, can appeal. Indeed, the bulk of what is known as international law is made up of the very treaties under discussion (including, of course, those which deal with other than commercial matters).

Just as the parties to a treaty are themselves the authors of the law governing their relations, so likewise are they, in the last resort, the courts which interpret this law and the officers who enforce it. While there exist today many arbitral bodies, of which the World Court at The Hague is the outstanding example, which undertake to adjust international disputes, it is open to any country to refuse to abide by their decisions. This is bound to be the case whenever the national interests of any state are seriously challenged. Where vital national interests are not in question, international commissions and courts may perform a useful work of conciliation and arbitration. It is clear, however, that any authority they may have rests, not upon a general "consent of the governed," but upon a specific voluntary acquiescence with respect to each separate issue. So long as each nation claims unlimited sovereignty, this is bound to be true, and the ultimate agencies of international law enforcement must be either the consciences of nations, influenced perhaps by world public opinion — or military force.

Fortunately, however, disputes as to the meaning of treaty provisions are not of intolerable frequency. Partly responsible for this fact, so far as commercial matters are concerned, is the extent to which the general rules of national treatment for individuals and most-favored-nation treatment for commodities have spread. Their wide acceptance is largely attributable to their simplicity, their fairness, and their importance. It is far easier to agree to apply well-understood general rules than to arrive at detailed specification with respect to every matter of international commercial importance. The fairness of treating the citizens of other countries the same as one's own and the goods of each country the same as those of any other country is obvious. And generally

speaking, it is equally if not more important for any one country to receive equality of treatment with all other nations than to secure hard-won and often short-lived special concessions.

TARIFF BARGAINING

On first consideration it would seem that the more widespread became the use of the most-favored-nation clause, the less would be the opportunity or the need for bargaining for tariff concessions. Equal treatment, however, though non-discriminatory, may still be very bad treatment, subject to alleviation by agreement. That the possibility of alleviation exists, even in the face of universal adoption of the most-favored-nation rule, will be shown in a moment.

Tariff bargaining is a process of negotiation between two countries, usually taking place shortly before the expiration of a previously existing commercial treaty, with the purpose of establishing their tariff relations on a definite footing. Sometimes the object is to secure either a unilateral or a reciprocal reduction of rates, sometimes merely to establish equal treatment. The methods used in bargaining, and to some extent the objectives, vary with the kind of tariff a country possesses.

A state with a single tariff may seek either special concessions or equality of treatment in one of two ways: by the threat of penalty duties or by the offer of concessions. The United States, the chief country to adhere consistently to a single-line tariff, may be cited as an example. In the tariff acts of 1890 and 1897 it provided for the penalty method of bargaining with countries producing sugar, molasses, coffee, tea, or hides. These products being at one or both of these dates on the free list, the President was empowered to impose duties on those coming from any country whose duties on our products he deemed to be "reciprocally unequal and unreasonable." While it is true that these freely imported commodities enjoyed, relative to dutiable articles, particularly favorable treatment, nonetheless it was to our interest to

accord them such treatment. Moreover, inasmuch as we insisted on our inalienable right to set our own duties as high as we pleased, the reservation of the right to judge the reasonableness of the duties of any other country would seem to involve considerable effrontery. It is not surprising that the results of this bargaining provision were negligible.

In the tariff of 1897 there was also included a clause permitting special reductions on a still more limited range of products (argols, brandies, sparkling and still wines, and paintings and statuary) in return for equivalent concessions. Agreements with nine countries were made under this proviso, most of them achieving for us not special but merely most-favored-nation treatment. Both in this and in certain later tariff acts there was included a section allowing broader use of the concessional method (reductions of duties up to 20% of the regular schedule), but because treaties embodying this provision had to be ratified by the Senate, thus permitting the opposition to become organised and extremely vocal, it came virtually to naught. With respect to this phase of our attempts at tariff bargaining, Culbertson writes:

Our experiences under the acts of 1890 and 1897 demonstrate conclusively the futility of bargaining for special and exclusive favors. No country could have been in a stronger economic position; but even so, the results — the actual trade gains — were small and uncertain. In no sense did they compensate for the effort put forth, for the mis-understanding arising, and for the ill-will which they engendered among other peoples.¹

Turning from the attempt to secure special concessions, Congress in 1909 introduced into the tariff a provision aimed at the elimination of discrimination against and the establishment of equality of treatment for American products, the method used being the imposition of additional duties (25%) upon imports from countries found to be discriminating against American goods. While some success attended this effort, a more vigorous and flexible provision of a similar nature introduced in the tariff of 1922 (and retained in the

¹ *Op. cit.*, pp. 139-140.

tariff of 1930) proved more effective as a weapon against discriminatory treatment. The 1922 act empowered the President to raise by 50% the duties against any or all products of a country found to be discriminating against our commerce (so as to place it at a disadvantage as compared with that of any foreign country), and if this was insufficient to bring about a removal of the discriminations, to enforce a total prohibition of import.

The shift in our bargaining objectives from special concessions to equality of treatment runs approximately parallel, it should be noted, with the shift in our interpretation of the most-favored-nation clause from the conditional to the unconditional. After the War, although we followed the illiberal policy of raising our customs duties in many instances to a new high point, we consistently adhered — both in bargaining and in treaty interpretation — to the principle of equality of treatment. More recently, in the trade-agreements program undertaken by Secretary Hull, we have re-introduced the concessional method of bargaining, this time, however, in combination with the principle of equality. Of this program, more later.

Where the maximum-minimum type of double tariff is in force, bargaining may follow either the concessional or the penalty method, depending upon whether the maximum or the minimum schedule is regarded as normal. This question is in this instance largely academic, however, since in any event the minimum duties are set at the protective level desired, and the maximum rates made applicable to all countries with whom no agreement is concluded. The minimum schedule may be granted in whole or in part in return simply for most-favored-nation treatment, or its extension may be made contingent upon certain specific duty reductions, depending upon what bargaining objectives are in view.

A country possessing a general-conventional tariff ordinarily sets its general schedule of duties at a high level, granting reductions from these to conventional or treaty duties which

are rarely less than fully protective and only as much below the general schedule as the exigencies of bargaining require. The conventional duties established as concessions from the general schedule have commonly, owing to the spread of unconditional most-favored-nation treatment, been generalised. Compatibility between the most-favored-nation clause and the principle of bargaining has been maintained by confining duty reductions, in any particular negotiation, to imports of which the other party is the principal source of supply. In this way, something is left to bargain about with other countries. (Where the maximum-minimum tariff is used, the same result is attained by limiting in each agreement the application of minimum duties to particular commodities.)

Tariff bargaining of the past half century can hardly be said to have enjoyed conspicuous success, except perhaps as a means of securing equality of treatment. Even here, doubt is cast upon its efficacy by the fact that Great Britain, until 1916 virtually a free-trade country, has been accorded at least as good treatment as nations with bargaining tariffs. As a means of bringing about a lessening of the restrictions on trade, bargaining has proved totally ineffective, since the trend of duties ever since the eighteen sixties has been rather consistently upward. Indeed, it has been the practice, just prior to the termination of a series of treaties, to raise the general duties to a "fighting" level. This policy, combined with the well-nigh universal sentiment that duty reductions are injurious to the country granting them, and the probability that owing to the failure of bargaining negotiations some general duties will remain in force, has been an important factor in bringing about the general rise of tariff barriers.

THE TRADE-AGREEMENTS PROGRAM OF THE UNITED STATES

One of the most hopeful developments in international relations in many years is the trade-agreements program inaugurated, under the leadership of Secretary Cordell Hull,

by the Roosevelt administration. It is hopeful not so much because it indicates a willingness to bargain but rather because it represents the introduction into tariff negotiations of a refreshingly new note. Starting from the postulate that full recovery from depression requires the elimination of many of the fetters whose recent growth has so hampered international trade, Mr. Hull rejects the view that the reduction of duties is injurious and brings to the conference table a willingness to bring down the actual effective rates of duty. Commencing his program at a time (1934) when the tendency everywhere was toward the multiplication of the restrictions on trade, he has certainly checked if not entirely reversed this trend. Such a remarkable policy calls for some elaboration.

Authority to undertake the reciprocal trade-agreements program was provided in an act of Congress passed in June, 1934.¹ This act empowered the President to enter into reciprocal treaties with foreign countries for the purpose of establishing mutual trade concessions, permitting him to lower or raise existing duties by 50%, but explicitly forbidding the transfer of dutiable commodities to the free list or *vice versa*. Ratification by the Senate of any agreements concluded is not required; they take effect upon proclamation by the President.

Although the stated purpose of the law is to expand foreign markets for products of the United States, and while it does not abandon the principle of "reasonable" protection, it does recognise the necessity of buying if we would sell as well as the superior importance of national welfare as contrasted with special interests. Also implicit in the policy is the realisation that foreign markets may be more important to the balance of our economy than protected domestic markets.

An interesting use of committee procedure has been established to put the new policy into effect. Announcement is first made of the fact that negotiations for a trade agreement

¹ The act was to remain in force for three years, but in January, 1937, it was extended for a further period of three years, until June, 1940.

with a particular country are about to be undertaken and of the commodities upon which duty reductions will be considered and sought. Hearings at which interested parties may make known their views are then instituted. These hearings are conducted by the Committee on Reciprocity Information, a committee consisting of representatives of the various government departments concerned. The information gathered at these hearings is prepared in mimeographed form for the consideration of another interdepartmental committee, the Trade Agreements Committee, whose task it is to determine what reductions in duties will be requested of the country with whom negotiations are under way and what duty reductions the United States is willing to grant. The resultant tables of concessions sought and concessions requested are turned over to a Country Committee, which carries out the actual task of negotiation, in consultation with the President and the Secretary of State, with frequent reference of disputed items back to the Trade Agreements Committee. After a period of several weeks, in some cases months, a reciprocal trade-agreement embodying various mutual concessions is made ready.

In all the seventeen agreements so far concluded,¹ the unconditional form of most-favored-nation treatment has been rigorously adhered to. The concessions accorded each nation in turn are generalised to all countries which do not discriminate against our commerce. By this means, any incentive so to discriminate, which might arise were the conditional form applied, is effectively checked, while certain existing discriminations have been eliminated. Moreover, while third countries benefit from each such generalisation, the United States likewise profits from any duty reductions which parties to our trade agreements accord to others. The tendency is thus for triangular as well as bilateral trade to increase with the

¹ Written in July, 1938. At that time, agreements had been concluded with Belgium, The Netherlands, Switzerland, France, Sweden, Finland, Canada, Cuba, Brazil, Haiti, Colombia, Honduras, Nicaragua, Guatemala, Costa Rica, El Salvador, and Czechoslovakia.

conclusion of each agreement, the very opposite of what has occurred where trade has been frozen and strait-jacketed in bilateral clearing agreements.¹

If the sum total of all duty reductions we stood ready to make were put into any single treaty, the operation of the most-favored-nation principle would of course destroy all possibility of further bargaining. This danger, harped upon by critics of the new policy, is imaginary rather than real. It can be avoided by the simple procedure ordinarily followed in the tariff bargaining of European countries, of granting no concessions to any country except on articles imported chiefly from that country. How effective this method can be, owing to the very considerable degree of specialisation of production in most nations, is indicated by an analysis of our imports by country of origin. Of all dutiable imports entering the United States in 1931, on the average 71% of each import came from some one country, only 29% from all others.² Therefore the limitation of each duty reduction to a commodity of which the state in question is the principal supplier, a practice consistently adhered to by the Trade Agreements Committee, avoids the destruction of future possibilities of bargaining, while general adoption of unconditional most-favored-nation treatment prevents future discrimination and assures us the benefits of any further removal of trade restrictions.

A further limitation with respect to duty reductions demonstrates that our new policy, though removing restrictions, is far from involving an abandonment of protection. The attempt has been made to grant reductions chiefly on articles which are not directly competitive to a serious extent. Where competitive products are involved, rate reductions are guarded to prevent serious disturbance of production and employment.

¹ Compare what is said in the chapter on clearing agreements.

² Data taken from an article on "Tariff Bargaining," by Benjamin B. Wallace, in *Foreign Affairs*, Vol. 11, p. 621 (July, 1933). Writing prior to the commencement of negotiations under the trade-agreements program, Mr. Wallace pointed out very clearly the answer to this particular criticism. He also indicated that so-called gratuitous extensions of concessions to third countries, under the unconditional most-favored-nation clause, would in reality be non-gratuitous in nature, since we would get similar extensions from other countries.

While it has been necessary to restrict concessions so far as possible to this relatively "painless" variety, nonetheless the inordinate height and irrational complexity of world tariffs, including our own, has been such that the number of cuts that can be made, with good effects on trade, is substantial.

TRADE OF THE UNITED STATES UNDER THE
RECIPROCAL TRADE AGREEMENTS

(Total Exports; Imports for Consumption. In Thousands of Dollars)

	<i>Exports</i>		<i>Imports</i>		<i>Per Cent Increase, 1936 over 1935</i>	
	1935	1936	1935	1936	<i>Ex- ports</i>	<i>Im- ports</i>
Trade with nine agreement coun- tries ^a	559,950	685,253	686,045	860,781	14.2	25.5
Trade with all other countries	1,682,924	1,768,234	1,361,440	1,558,448	5.1	14.5
Total trade	2,282,874	2,453,487	2,047,485	2,419,229	7.5	18.2

	<i>Exports</i>		<i>Imports</i>		<i>Per Cent Increase, 1937 over 1936</i>	
	1936	1937	1936	1937	<i>Ex- ports</i>	<i>Im- ports</i>
Trade with fourteen agreement coun- tries ^b	857,606	1,159,161	996,347	1,152,253	35.2	15.6
Trade with all other countries	1,598,372	2,185,997	1,422,882	1,860,236	36.8	30.7
Total trade	2,455,978	3,345,158	2,419,229	3,012,487	36.2	24.5

^a The countries are: Belgium, Sweden, Switzerland, Canada, Netherlands (and Netherlands India), Cuba, Brazil, Honduras, and Haiti.

^b The countries to be added to the former list are: France, Finland, Colombia, Guatemala, and Nicaragua.

Source: *Monthly Survey of Foreign Commerce*, December, 1935, 1936, 1937. U. S. Bureau of Foreign and Domestic Commerce. The slight discrepancy in the figures for total exports in 1936 in the two series results from minor corrections made before publication of the data in 1937.

The trade-agreements program has also inaugurated at least a first attack upon another aspect of the strangulation of international trade. This is embodied in the extension in the agreements so far concluded of the most-favored-nation principle to import quotas and exchange control. As applied to these forms of restriction, it has been taken to mean the allocation to each country of a proportion of the total imports of any article equivalent to the proportion in a base period when controls were not in operation. By thus enforcing an equitable distribution of the available trade, this provision tends to combat the recent trend toward bilateral barter arrangements.

Of the seventeen agreements so far negotiated, six were in effect prior to January 1, 1936, three more went into force within two months of that date, and five others in the course of the year. Thus for most of 1936, nine trade agreements were in full operation; for all of 1937, the figure is fourteen. The trade data of the United States during these years should throw some light upon the concrete results of the trade-agreement program. The table on the opposite page compares the growth of our trade with agreement countries in 1936 and 1937 over the preceding year with the increase in trade with all other countries and with total trade.

The increase in both exports to and imports from agreement countries in 1936 was markedly greater than for non-agreement countries, the percentage increase of exports being nearly three times and that of imports nearly twice as great for the former as for the latter group. The more rapid growth of imports is also noteworthy. During 1936, the evidence seems to indicate clearly that trade with agreement countries received a considerable stimulus.

The figures for 1937 offer a striking contrast. Exports to trade-agreement countries increased by 35.2% over the preceding year, a remarkable growth, but were exceeded in their rise by exports to non-agreement countries, which increased by 36.8%. Even more in favor of the latter group are the data for imports, exhibiting a 30.7% rise in the case of non-agreement countries as contrasted with an increase of 15.6% for

agreement countries. Also worthy of attention is the shift to exports; imports increased far more rapidly than exports in 1936, while the reverse was true in 1937.

Must we conclude that the trade agreements provided a sharp stimulus to trade in 1936, but that in 1937, with more nations included in the program, the reduction of tariff barriers no longer had any effect? Not at all. There is not the slightest doubt that both our export and our import trade with agreement countries was in 1937, as in 1936, facilitated by the existence of the agreements — that trade with these nations would have been smaller in their absence. The more rapid increase of our trade with non-agreement countries must be attributed to special circumstances which are revealed by an examination of the trade figures for particular countries and particular commodities. Thus, for example, our exports to Japan, a nation with whom we have no trade agreement, increased in 1937 by more than 40%. This was largely the result of the war in China, which made it necessary for Japan to buy from us large quantities of scrap steel, petroleum, cotton, and other materials of war. Again, imports into the United States increased most rapidly (from 40 to 100%) from such raw material-producing countries and regions as the Argentine, the west coast of South America, the U.S.S.R., the entire southern portion of Asia from Turkey to the Philippine Islands, and Oceania and Africa. The raw materials imported from these countries account for over half our total imports, and were needed for the rapid expansion of business activity which went on into the summer of 1937. A considerable proportion of the increase in these imports is accounted for by rising prices, brought about by an over-rapid buying of stocks for inventory purposes. It is likewise true that our exports to many of these countries rose more rapidly than exports to agreement countries, as is only natural in view of the fact that we were purchasing heavily from them.

Figures for world trade are complex, and require detailed analysis if valid conclusions are to be drawn from them. As the foregoing brief investigation shows, it would be foolhardy

to conclude that because trade expanded more rapidly with non-agreement than with agreement countries, therefore trade agreements depressed rather than stimulated trade. During the particular period in question (1937), other important causes than our trade-agreement program promoted increased trade. It is equally true, of course, that caution must be employed in drawing conclusions favorable to the program from the 1936 figures. In this case, however, no other important forces were present which tended to bring about a more rapid expansion of trade with agreement countries.

In conclusion, it may confidently be asserted that the trade-agreement program of the United States has operated to increase trade. This is true both with respect to trade with those countries directly affected by the reductions in tariffs (including some which profited from most-favored-nation generalisation of the reductions) and with respect to trade with third countries, through the expansion of triangular trade. The new treaties are without doubt accomplishing their purpose of liberalising and stimulating international commerce.

One further word may be said with regard to the shift in the relative rate of increase of exports and imports in the two years under examination. Opponents of the American trade program regarded the spurt in imports in 1936 as conclusive evidence that our economy was being put at the mercy of foreign producers. The change in the data for 1937 should make them happy. In view, however, of our international economic position as a creditor nation, it is to be hoped and expected that the future will witness a trend toward a more rapid increase of imports than of exports. A less "favorable" balance of trade should be welcomed rather than disparaged, unless it is our deliberate wish to discourage the payment of interest and dividends on our holdings of foreign securities and the repayment of the debts owed us.¹ Moreover, it should be

¹ At the end of 1936, long-term investments by Americans in foreign countries amounted to approximately \$12,486,000,000. (*Balance of International Payments of the United States in 1936*, p. 33.) No corresponding figure for foreign long-term investments in the United States is given for this year. The figure for the end of 1935, however, was estimated to be \$5,035,000,000. (*Bal-*

borne in mind that an increased proportion of imports, by permitting the payment of debt services, will also, by easing the strain on the exchange of debtor countries, facilitate the removal of exchange controls and other impediments to trade.

Critics have also alleged that the abolition of the requirement of Senate ratification and the committee procedure followed have resulted in an autocratic method of tariff-making. If by this they mean that lobbyists have less chance of making their narrow views predominate, that the national welfare is given fuller consideration, they are right. If they mean that full weight is not accorded to the effects of duty reductions upon employment and upon capital values, that established American industries are willfully injured, they are wrong. There has been no abandonment of our long policy of protection, but an intelligent moderation thereof in a world where economic policy has for some years been directed toward stifling trade rather than toward increasing it.

SUGGESTED REFERENCES

Haberler, Gottfried von, *The Theory of International Trade*, Chapters XX, XXI.

Paranaguá, O., *Tariff Policy*, Chapter IX.

Culbertson, W. S., *Reciprocity* (McGraw-Hill, New York, 1937).

Whale, Barrett, *International Trade*, Chapter VII.

Smith, James G., "Development of Policy under the Trade Agreements Program," *Quarterly Journal of Economics*, Vol. L (1936), p. 297.

Berglund, Abraham, "Reciprocal Trade Agreements Act of 1934," *American Economic Review*, Vol. XXV (1935), p. 411.

Popper, David H., "The Hull Trade Program," *Foreign Policy Reports*, October 15, 1936.

Edminster, L. R., "The Trade Agreements Program and American Agriculture," *American Economic Review, Supplement*, March, 1936 (Vol. XXVI).

Sayre, Francis B., "How Trade Agreements Are Made," *Foreign Affairs*, Vol. 16 (1938), p. 417.

ance of International Payments of the United States in 1935, p. 56.) During 1936, net receipts from foreign long-term investment in the United States amounted to \$596,000,000, which brings our total indebtedness to foreigners on long-term account to \$5,631,000,000. Subtracting this sum from our total long-term credits of \$12,486,000,000, it appears that the United States was a net creditor with respect to long-term investment to the extent of \$6,855,000,000.

CHAPTER VIII

IMPORT QUOTAS AND EXCHANGE CONTROL

DURING and immediately after the War of 1914-18, the wave of nationalist feeling which swept over most countries brought with it a violent resurgence of protectionist sentiment which led to a general heightening of tariff barriers. The succession states of the Austro-Hungarian Empire erected totally new and economically inexcusable tariff walls. The United States in 1922 turned its back on the relatively low duties of the 1913 tariff and raised the duties on many imports to record-breaking heights, while even free-trade Great Britain took a considerable stride toward protection with the introduction of the McKenna and the Safeguarding duties. In almost all countries, a similar process was under way. Nor was this burst of trade restrictions confined to tariff increases. The monetary disturbances of the period, in particular the rapid depreciation of many European currencies, both re-enforced the demand for higher duties and led to the establishment of outright prohibitions of imports and exports, import quotas, and certain forms of exchange control. During the prosperous years of the twenties, however, the restoration of international trade and the re-opening of normal trade channels made possible the gradual abolition of these excessive War and post-War restrictions.

Not for long, however, was this period of comparative economic peace to endure. Only a few months after the onset of the world depression, in June, 1930, President Hoover signed the Smoot-Hawley Tariff Act raising a considerable number of our duties even above the high levels attained in the 1922 tariff. Partly in retaliation, partly in response to

depression influences, our action was quickly followed by many other countries, notably Canada, Cuba, Mexico, France, Italy, Spain, Australia, and New Zealand. As the severity of the depression increased, forcing prices ever lower, the movement toward higher tariffs became a steady march and the march eventually a stampede. It would be merely tedious to enumerate all the countries and even the more important commodities involved. Suffice it to say that Great Britain, long the stronghold of free trade, finally gave way in 1931 and introduced a general tariff, and that never — with the possible exception of the Mercantilist period — has the general level of duties throughout the world been so high as in recent years.

Moreover, the abnormal restrictions of the War and post-War period, in particular import quotas and exchange controls, have returned with redoubled virulence. Compared with the effective and expanded instruments they have recently become, the similar measures of 1914-23 appear crude indeed. Although it is true that the extent of their use varies widely from one country to another, they have been adopted in some form, in contrast to their earlier more limited application, by almost every nation. Also, the range of commodities and transactions affected is far larger, the number of devices much greater, and the cleverness of their elaboration more ingenious. World trade has become enmeshed in so incredibly complex a network of restrictions that it is a wonder so much remains.

The reasons for this state of affairs are not far to seek. Economic nationalism, while it remained dormant during the twenties, by no means disappeared. It required merely the pinch of adverse circumstances and the concomitant fear of foreign competition to awaken it once more to full vigor. Furthermore, the decline in employment and incomes wrought by the dépression¹ caused such a collapse in demand that the prices of many commodities, especially of raw materials and

¹ The International Labour Office estimated world unemployment at 30,000,000 in early 1933. (*World Economic Survey, 1932-33.*)

foodstuffs, fell more than 50%. The pressure of declining prices and demand, coupled with an almost complete cessation of international lending, hit debtor countries with particular severity. During the twenties, these countries had been able to meet an otherwise adverse balance of payments by means of a fairly steady flow of funds from the lending nations. Among the latter, the United States in this period came to occupy a prominent place. Thus, between 1919 and 1928 our net export of long-term capital fell below \$450 million in only one year (1923), and most of the time was between \$500 and \$700 million. In 1929 and 1930, these capital exports fell sharply, and beginning in 1931 were replaced by a net import of capital (owing to relatively large repurchases of their own securities by foreigners).

Not only were countries of the usual debtor type (relatively undeveloped lands) caught between the millstones of declining export values and fixed debt charges, but so also were the leading nations of Europe. Great Britain, France, and Italy, as well as other countries, owed large sums on account of war debts to one another but principally to the United States. Until 1931, they had been able to meet the annual charges on these borrowings because Germany, in turn, paid them a roughly equivalent amount in reparations. But Germany's ability to pay rested to a considerable extent on large annual loans from the United States. When this source of funds dried up, Germany quickly found herself unable to continue reparations payments, which meant the Allies could no longer maintain the service of their war debts. The Hoover Moratorium of 1931, which brought temporary relief, was succeeded by an unofficial and apparently permanent moratorium on all reparations and war debt payments.¹

Most debtor nations, however, were unable to arrange moratoria and were unwilling to default, since their debts were commercial or financial rather than political in nature and

¹ A few "token" payments were made for a short time after 1931, but now these too have ceased. Only Finland, whose war debt is comparatively minute, continues regularly to meet her installments.

origin. Faced with a heavy fixed burden of debt and with both the volume and value of their exports tumbling precipitately, it became essential for these countries to seek every means of expanding exports and of contracting imports if their balances of payments were not to become hopelessly unfavorable. Failure to take appropriate action meant a heavy loss of gold and ultimate abandonment of the gold standard, or if the gold basis had already been deserted, severe depreciation of the international value of a country's currency and a resultant further increase in the burden of external debt. Small wonder then that first higher tariffs, then more restrictive import quotas, and finally rigorous measures of exchange control were widely introduced, one after another.

With some idea of the direction of recent changes in commercial policy and of the reasons for these developments, we may now proceed to examine in greater detail the nature and operation of the newly introduced restrictive measures. The understanding thus gained will provide the basis for a survey of their consequences and for an estimate of their justification.

IMPORT QUOTAS

Import quotas involve the limitation, usually for a given period of time, of the quantity or value of the imports of a commodity. A quota is simply the announced amount of imports which will be permitted entry.¹ Unlike tariffs, which restrict trade by raising the price of foreign products but allow an unlimited volume of imports provided the duty is paid, import quotas prohibit all trade above a specified quantity.

¹ The licensing of imports is a similar practice, in that the volume of imports allowed to enter a country is restricted. Importers are required to secure licenses from some governmental authority before they are permitted to import. Licensing systems differ from quota systems, however, in that the quantity of imports permitted entry is not specified in advance, each transaction being considered on its own merits. Sometimes, as in France, the issue of licenses is combined with quotas.

Mention should also be made at this point of the tariff quota, which differs from the true import quota in that a fixed amount of a commodity is permitted entry at a relatively low rate of duty (as Cuban sugar imports into the United States under our trade agreement with that country), while unlimited amounts may be imported at the regular, higher rates of duty.

They are a measure of direct, quantitative restriction, a half-way house to complete prohibition of trade.

Although common enough in the first half of the nineteenth century, import quotas were thereafter generally given up, with certain limited exceptions relating to public security (the import of arms), health (veterinary and plant regulations), and other non-economic objects. After the War, as we have already noted, many countries reintroduced these restrictions temporarily to safeguard "key" industries, to restrict luxury imports, and to facilitate economic readjustment from a war-time to a peace-time basis. With the intensification of the recent depression, import quotas were resorted to in wholesale measure, partly because they promised to be a more effective and flexible weapon of protection than tariffs, partly because they seemed to offer a means of guarding against too adverse a trade balance.

France, more than any other country, has resorted to the use of import quotas, having by 1934 applied them to about half of the 7,000-odd items in her tariff list. In many cases, imports permitted have been considerably less than half the quantities entering before the depression. These drastic restrictions, together with the deflationary influence of the depression, brought about a decline of French imports from 58 billion francs in 1929 to 23 billion in 1934. Originally introduced in late 1931 as an emergency method of protecting French industries against rapidly falling prices and increasing imports, primarily of agricultural products, quotas were maintained and extended as exchange depreciation became widespread. It is noteworthy that with France's own departure from the gold standard in September, 1936, she felt it possible to relax many of her quota restrictions.

The technique of quota administration is of considerable interest. Ordinarily each quota is fixed by some executive agency of the government. Thus in France the Ministry of Agriculture determines those for agricultural or animal imports, the Ministry of Shipping those for fish, and the Ministry of Commerce and Industry those for manufactured goods.

The time period to which quotas apply varies from country to country, the longest being a year, the shortest a month, with a three-month interval probably the most widely used. The volume of imports permitted is usually calculated as some percentage of imports in an earlier base period, and is generally, of course, considerably less than 100% thereof. Shipments in excess of a quota cannot always be avoided; when they occur, they are ordinarily charged to the succeeding quota period, though in some cases entry is permitted upon payment of a duty higher than the normal tariff rate.

Four leading methods of allocating quotas may be distinguished. The simplest of these is to announce a "global" quota, a fixed world total irrespective of the country of origin, and to permit imports until this quantity is exhausted. According to this method, no specific restrictions are imposed upon individual importers (or exporters abroad) — they are left free to conduct their business within the general limits of the quota. Quite naturally use of this method has resulted in a rush to import at the announcement of the volume of importations to be allowed, and inevitably has tended to favor neighboring countries to the detriment of those more distant. Because of these disadvantages, the global quota has generally given way to the method of allocating a specific proportion of the tolerated imports to individual countries. Under this system also, importers and exporters are made responsible for staying within the quota. Owing to the constant tendency to exceed allotments, together with the fact that it imposes an undesirable rigidity as to sources of supply,¹ a third type of administration has been widely adopted. This is the distribution of licenses to importers, these licenses being required for each specific importation. In France, the licensing system is administered by a whole series of committees consisting of representatives of producers and merchants in each trade concerned. Licenses are distributed within the framework

¹ Costs and other aspects of supply conditions are of course constantly changing. For such change, no allowance is made in this type of quota. As a result, quotas for some countries would be largely exceeded while those for others might be but partially used.

either of a fixed global quota or of specific country allocations, though where the latter method is combined with licenses, considerable latitude of action is left to the committee. This kind of quota system provides much closer control over the volume of imports and avoids many of the objections to the global and country quotas ; but it possesses disadvantages of its own, notably that of requiring an inordinate amount of red tape in the form of applications, the provision of records of previous imports, the submission of samples, and administrative action by the committees as well as higher commissions. A fourth type of quota has also been widely used, particularly in France, where it is principally applied to imports of manufactured articles. This is the bilateral quota (*contingentement aimable*), in which imports are regulated by agreement with the government of or the exporters in the country concerned. Instead of import licenses, certificates to export are provided by a Chamber of Commerce, an exporters' organisation, or the central government in the exporting country.

It will be seen that the allocation of quotas involves two distinct problems : the apportionment of imports among the various supplying countries, and their apportionment among firms directly engaged in foreign commerce. The simple global quota attempts no solution to either problem. Country quotas provide a method of meeting the first difficulty, but in themselves do nothing to resolve the second. A system of licensing takes care of the allocation of imports to individual importers. When combined with quotas, the problem of international distribution is specifically provided for ; when combined with a global quota, this problem must be worked out in the course of administration by the appropriate committee. Bilateral quotas apportion imports to each country individually and leave their distribution among the trade to be worked out by the exporting nation.

Where a system of licenses is in use, various methods for their allotment may be followed. The one most widely adopted is to distribute among importers a quota (through

specific licenses to import) upon the basis of their previous record of business. Importers are granted licenses upon the basis of their share of imports in some preceding period. In this manner, the favors are at least distributed equitably. The method is essentially static, however, there being no allowance for the appearance of new firms or the disappearance of old. Where the importers (or exporters, with a bilateral quota) are members of a trade association or cartel, as is frequently the case in Germany, the entire quota may be turned over to the cartel for apportionment among its members.

Probably the simplest way of achieving equity in the distribution of licenses would be, as Haberler suggests, to sell import licenses to the highest bidders. By this means the ordinary market practice of excluding all but the most willing buyers would be carried out, while the state rather than private individuals would derive the chief gain from the artificial profitability of importing which frequently exists. Although license fees have been used in France to provide some revenue, the full market value of a license is not exacted. So far as is known, this method of auctioning the privilege of importing has never been tried, except possibly in the limited and extra-legal form of bribery.

Among the various effects of import quotas, their influence on prices is outstanding. In common with tariffs, quotas — by restricting the low-cost contributions to domestic supply — tend to raise the prices of commodities to which they apply. There is this difference, however. The rise in price induced by tariffs is limited to the amount of the duty, less any decline in price that may take place abroad. There is no such limit to the effects of a quota, since the restriction of imports is absolute, permitting no adjustment through a reduction of the price abroad. The extent of the price rise brought about by a quota will depend upon: (1) the degree to which the foreign supply is restricted; (2) the volume and elasticity of demand in the importing country; and (3) the elasticity of both foreign and domestic supply.

The effect of an import quota upon the price of a commodity may be shown diagrammatically.¹ The first of the following diagrams shows the situation in a given commodity market supplied from both domestic and foreign sources. S_1S_1 is the

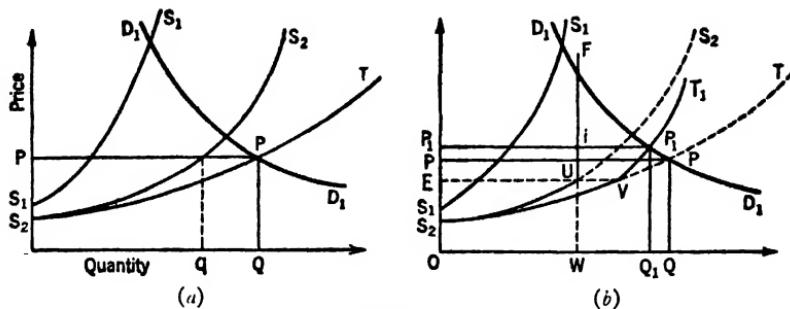


FIGURE IV

domestic supply curve, S_2S_2 the curve for imports, S_1T the curve of total supply. With a demand of D_1D_1 , a price of OP for total sales OQ will be established with Oq provided by imports, qQ by domestic production. (Conditions of increasing cost are assumed. The effect of any tariff may be regarded as taken into account in drawing S_2S_2 .)

The second diagram illustrates the effect of introducing an import quota under which imports are limited to OW . The foreign supply curve becomes S_2UF . Up to the point V , the *total* supply curve remains unchanged; from this point onward, since additional increments of supply can come only from domestic sources, VT_1 must be drawn parallel to S_1S_1 , the domestic supply curve. Total supply is now represented by S_2VT_1 . A new price of OP_1 will be established, with total sales of OQ_1 . Imports shrink from Oq to OW , home production expands from qQ to WQ_1 .

Under different assumptions than those represented in the diagrams, the extent of the price rise would be different.

¹ I am indebted to F. A. Haight, *French Import Quotas*, for the diagrammatic illustration used here, and for part of the analysis. Indeed, the reader of his book will note a considerable further indebtedness for much of the information provided in this section, an indebtedness which I take this opportunity of acknowledging. (Permission to reproduce chart granted by P. S. King & Son, Ltd.)

Were the quota (OW) smaller, the significant portion of the total supply curve (VT_1) would lie farther to the left, intersecting the demand curve at a higher point. A more inelastic demand curve (drawn through P) would also raise the point of equilibrium between demand and supply. With a more elastic foreign supply curve (rising more steeply beyond the point U), the original curve of total supply (S_2VT) would intersect D_1D_1 at a lower point, so that a quota of OW, though establishing the same price (OP_1), would raise it from a lower original base. Finally, a more *inelastic* domestic supply curve would, by shifting VT_1 to the left, also cause the price under a quota to be higher. For the opposite assumptions in each case, the ultimate price would be lower.

If importers are able to make purchases abroad at marginal cost (WU in diagram (b)), the introduction of a quota makes possible the appearance of excess profits from importing. By buying at WU per unit and selling at W_i (OP_1), an extra profit of U_i per unit can be made. For all imports, gross additional profits will be $EUiP_1$.¹ Naturally, where such a situation exists, the pressure to enter the importing business is great. In France, both before and after the introduction of bilateral quotas, exporters in other countries established their own agencies behind the quotas, so to speak, to the detriment of French importers. Whether the exporter abroad or the importer at home takes this additional profit, one thing is certain — the consumer pays it.

Quotas were introduced in France in 1931 principally as a quick method of providing additional protection, especially to agricultural products, imports of which had increased sharply in 1930 and 1931. Regarded as an emergency protective measure, quotas are more effective than tariffs. They can be rapidly imposed or altered, and they place an absolute limit on the volume of imports. Tariffs, on the other hand, whether autonomous or conventional, can usually be changed

¹ Net additional profits will probably be less than this, partly because compliance with quotas involves some additional expense, partly because some of the costs of doing business do not diminish in proportion to the reduction in its volume.

only after considerable delay, since it is necessary to wait for parliament to debate or for a treaty to expire.

In addition to their use as a protective device, quotas have also been inaugurated as a means of safeguarding the balance of trade, or preventing the growth of too adverse a volume of imports in relation to exports. From this point of view, they have proved disappointing, for the reason that their sponsors overlooked their probable effect on the export side of the balance. There are three ways in which exports may be affected, all of which have doubtless been realised in practice. First, foreign exporters, unable to dispose of quotaed articles or forced to sell them outside the quota country at lower prices, will provide less purchasing power to buy the latter's exports. Second, by maintaining or raising prices, whether of raw materials or of elements in the cost of living, quotas serve to keep costs of production in the quota country at an abnormally high level. On this point there is abundant factual evidence.¹ Finally, quotas, even more than tariffs, provoke retaliation. Within a few months after the inauguration of a quota system by France in July, 1931, nineteen countries had followed her example; by August, 1934, the total number of imitators was twenty-seven. While this does not mean that these quotas were established for the sake of retaliating, it is probable that had France not set the example, the system might have been less widely used.

Aside from their efficiency as emergency measures, import quotas have little to recommend them. Their very restrictiveness is, at least from a long-run international point of view, against them, and this restrictiveness is greatly increased by the very fact that they are so changeable. Their tendency to provoke retaliatory action in turn brings about a further shrinkage of trade. They have the additional disadvantage, relative to tariffs, that the state loses revenue, a loss which must be considerable.

We have already seen that import quotas, so far as they involve a reduction of supply to a smaller volume than could

¹ See especially Haight, *op. cit.*, Chapter III, and p. 401 below.

be disposed of at a normal competitive price, tend to set up an importers' monopoly, to the serious disadvantage of consumers. The arbitrary allocation of quotas among countries on the basis of imports in some base period also tends to reduce competition among foreign suppliers. For under conditions even of such relatively free trade as obtained prior to 1931, the proportions of a given import trade enjoyed by any one country were constantly undergoing change, owing to differing rates of technical progress, the competition of substitutes, the appearance of totally new commodities, and short-run disturbances such as crop failures. The allotment of fixed or comparatively unchanging quota proportions to different national sources of supply thus freezes the competitive situation and prevents the importing country from securing the benefits of changing conditions of supply.

This brief discussion of the effects of quotas by no means exhausts the subject. It will be more convenient, however, to reserve for later consideration certain of the broader consequences of quota systems. For similar results follow from or are reenforced by the various schemes of exchange control introduced in recent years. The influence of both types of trade restriction can be examined simultaneously.

EXCHANGE CONTROL

In the broadest sense, exchange control consists of any measures taken by a government to influence exchange rates. According to such a definition, even the adoption of a gold standard would constitute exchange control, since this would establish (at least against other gold standard countries) definite limits to the fluctuation of the exchanges. Likewise included would be ordinary central bank action to protect the gold standard, such as raising the discount rate to check an outflow of gold, as well as other types of action which incidentally influence the demand and supply of exchange. Indeed, complete absence of exchange control could be said to exist only in the case of a free inconvertible paper currency.

The accepted meaning of exchange control, being generally limited to measures directly aimed at affecting exchange rates by influencing the demand and supply of exchange, is rather narrower than this. The actual policies or measures in which exchange control is concretely embodied are numerous, and vary widely as to their rigor and effectiveness. They may be divided into two main groups: intervention, or direct action in the foreign-exchange market by the monetary authorities, and exchange restrictions or measures intended to reduce the demand or increase the supply of foreign exchange.¹

Intervention, or active participation in foreign-exchange dealing by the government, may vary from passive support of the market by standing ready to buy or sell foreign currencies, to active purchases and sales of exchange. An example of passive intervention is furnished by the British "pegging" of the sterling-dollar rate during the War, when the British government or its agents purchased all sterling offered at a fixed rate. The Exchange Equalisation Account, a huge fund put at the disposal of the British Treasury in 1932 for exchange control purposes, has been used both actively and passively. The same may be said of the \$2,000,-000,000 American Exchange Stabilisation Fund.

Nowadays, the story of exchange intervention is largely the story of the operations of these huge official funds, as they have been established not only in Great Britain and the United States but in other countries as well, including France, Switzerland, and Holland. Their operations are conducted in the greatest secrecy. This is often desirable, especially when the resources of the exchange authorities are small relative to those of the market, although when the government is in a strong position and is known to be, full publicity might

¹ These are the convenient terms adopted by Dr. Paul Einzig, whose *Exchange Control* provides the most comprehensive description of the numerous measures of control with which I am acquainted. Dr. Einzig lists gold policy as a third type of exchange control, coordinate with intervention and restriction. On the grounds that gold policy (including devaluation) is not a continuing measure, but is more in the nature of a definitive once-for-all step, I prefer to treat it as a somewhat exceptional type of policy, subordinate to the other two.

assist it in its effort by causing private dealers to line up on the winning side.¹

The other chief type of control, exchange restrictions, consists of a wide variety of official pressures on and regulations of the exchange market. These measures aim principally at reducing the demand for foreign currencies, to a lesser degree at increasing the supply. They may be grouped into three main categories, according to the source of the demand or supply of exchange at which they are directed:² namely, measures related to (1) speculative transactions, (2) capital and capital service items, (3) movements of goods.

With respect to each of these objectives, the action taken by a government may vary both as to scope and as to rigor. Thus under favorable circumstances speculative dealings may be sufficiently held in check by mere official disapproval brought to bear on foreign-exchange dealers. Where the prospective profits from speculation are large, more drastic steps will be necessary, such as the quantitative limitation of the exchange made available to speculators, or the absolute concentration of all exchange dealings in the hands of an official agency, with foreign currency obtainable only through license.

Three main types of capital and capital service items may be distinguished, in relation to which different measures of control are appropriate. Domestic capital may attempt to move out of the country into foreign balances and securities, service on foreign capital invested in the country or repayment of principal may require the transfer of funds abroad,

¹ For an excellent discussion of the merits of secrecy *versus* publicity, see Einzig, *op. cit.*, pp. 90-95. The fullest treatment to date of the operations of the British exchange fund is to be found in *The Exchange Equalisation Account*, by N. F. Hall.

² Einzig lists five such groups: namely, restrictions on (1) capital movements, (2) speculation, (3) external debt payments, (4) imports, (5) holdings of foreign currencies. *Op. cit.*, pp. 13-14. Since capital movements, external debt payments, and holdings of foreign currencies are each simply one aspect of capital and capital service payments, simplification is served by so grouping them.

and finally, residents of the country with exchange controls may hold or acquire foreign balances and securities.

Unofficial discouragement of the export of domestic capital has seldom proved effective, and has generally given way to prohibition of the flotation of foreign issues within the country concerned or to prohibition of the sale of foreign exchange for the purpose of capital export. Enforcement of the latter measure may, as in England, successfully be left to the banks, or it may be established by official supervision, as in the United States in early 1933.

The commonest measures employed with respect to external debt payments have been standstill agreements and transfer moratoria. The former involve agreement on the part of the creditors to permit temporary freezing (*i.e.*, non-payment) of their credits; the latter represent simply a refusal of the nation to allow the purchase of foreign exchange for the transfer of debt payments. To avoid the stigma of complete default, nations enforcing transfer moratoria generally arrange that the sums owed on foreign debts shall be paid in national currency into special accounts (the notorious blocked accounts, of which more later). Sometimes these blocked funds may be used freely in the purchase of export products; on other occasions their disposal is closely restricted. Finally, the supply of exchange available to the government may be increased by requiring the surrender by citizens of their current acquisitions of foreign balances or by extending this requirement to old balances and foreign securities held abroad.

With regard to goods movements, all the various forms of restrictions on imports must be classed as measures of exchange control when their object is to influence the exchange rates. Since these restrictions, by reducing the demand for foreign exchange, are bound in any event to affect exchange rates, their classification under the heading of exchange control must depend upon the purpose for which they are introduced. Some of the high protective duties established during the depression have probably been designed primarily to diminish

foreign-exchange requirements rather than to protect domestic industry. The same assertion can be made even more strongly of the manifold import quotas, although, as we noted earlier, they have also served as a flexible instrument of protection. On the side of the supply of exchange, export bounties and subsidies — used widely in Germany — must be listed as a means of exchange control.

Closely related to exchange control proper (intervention and restrictions) are gold policy and currency devaluation, since both are primarily directed toward altering the international value of a currency. The chief weapon of gold policy consists in progressive changes in the buying and selling price of gold, aiming eventually at definite devaluation.¹ This type of action was adopted by the Roosevelt administration between October, 1933, and January, 1934, when the buying price for gold was gradually stepped up from \$20.67 to \$35.00 an ounce. At first, the buying price was effective only for gold produced in the United States. Since this did not bring the desired fall in dollar exchange, active purchases abroad at the declared price were undertaken, with the result that the dollar depreciated as the gold buying price was raised. Finally, on January 31, 1934, the dollar was stabilised at the price of \$35.00 an ounce, involving a devaluation of 40.94 per cent. Without similar preliminaries, Belgium devalued her currency in March, 1935, by 28 per cent. France, Switzerland, and the Netherlands followed suit a year and a half later with devaluations of 30, 30, and 20 per cent respectively.

In actual practice, since exchange control is merely a miscellany of very different official measures, it exhibits wide variations from one country to another. Great Britain, for

¹ Exchange rates may also be affected by varying the mint charges and by paying out less than fine instead of fine gold. Since these measures, however, generally aim not at an alteration of the exchange rates but at influencing the flow of gold, they are not considered here as elements of exchange control. Mr. Keynes' suggestion in favor of widening the spread between the buying and selling price of gold is in a similar category, since it aims at permitting greater fluctuations in gold rates of exchange rather than at directly influencing the rates themselves.

example, has confined exchange control to operations of her Exchange Equilisation Account (intervention) and to the enforcement of an embargo on capital exports. Though the introduction during and after 1931 of protective duties and a limited range of import quotas has not been unrelated to the international position of sterling, these measures were adopted primarily to foster domestic industry rather than to safeguard the balance of payments. In France, prior to the devaluation of the franc in September, 1936, import quotas constituted the chief instrument of preventing the development of too adverse a balance of trade, though strong official pressure was brought to bear against the export of capital and numerous technical obstacles were set in the way of such transfers. It is in Germany, Italy, certain Latin American countries, and the states of central Europe and the Balkans that exchange control has been carried to its most advanced stage. In Germany the most extreme form of control, complete suppression of free dealings in the exchanges, has been in effect since 1934. All purchases of foreign currencies must be made from the Reichsbank, and all foreign exchange acquired through exports or other transactions sold to that institution. Exchange is made available only for purposes approved by the government, principally for the purchase of essential imports of foods and raw materials, the necessary exchange being allotted through the issue of permits to individual importers. Payment of interest on or principal of foreign debt is subject to transfer moratoria, the sums due being paid into blocked accounts over which the creditors have only limited disposal. Declaration and surrender to the government by German nationals of all foreign security or currency holdings is required. Violators of this requirement are liable to prosecution for "economic treason," and may be punished by long-term imprisonment and confiscation of property.

Of course such drastic regulations breed attempts at avoidance on the part of individuals who stand to profit by such action, and they are very difficult to enforce.

There are innumerable ways by which holdings of foreign assets can be disguised, and in the absence of any cooperation between the authorities of various countries it is difficult to trace such assets and entirely impossible to seize them. In so far as they are managed by banks abroad the secrets of customers are jealously safeguarded. Provisions are sometimes made to avoid any correspondence on the subject of the accounts in question, for fear that the telegrams or letters might be intercepted. In certain countries, particularly in Switzerland, the banks specialise in such secret accounts, which often bear no name but merely a password so as to safeguard their owners against espionage and leakage of information. In the circumstances it may be said that, generally speaking, this type of exchange restriction (compulsory surrender of foreign balances or investments) is the most ineffective.¹

The inevitable accompaniment of the more rigorous forms of exchange control has been the appearance of "black markets," where illegal transactions in foreign exchange are carried out, usually at rates considerably below the official (and artificial) rate. These "black" exchanges have proved very difficult to suppress, though it has been possible, by drastic measures of law enforcement, to make transactions on them very risky and thus to restrict narrowly the scope of their operations. Gradual repayment of a considerable proportion of short-term foreign obligations and the conversion of some part of them into long-term loans, by reducing the volume of the more pressing transfer claims, has aided the task of eliminating illegal transactions. Probably the most effective assistance, however, has come from the device of the blocked account; a topic of sufficient importance to warrant further explanation.

The blocked account is itself a type of exchange restriction designed principally to supplement transfer moratoria. Though the transfer of funds abroad to pay interest or repay the principal of foreign loans may be forbidden, nonetheless efforts will be made to effect such transfers in an illegal way. By compelling the payment of sums due foreign lenders into

¹ Einzig, *op. cit.*, p. 121.

accounts at specially designated banks, and by restricting the use to which these funds may be put, the amount of transfers is brought under direct control. The creditors may be left free to use these blocked accounts for any purpose whatever, *within* the debtor country. By selling these funds to importers at home or in various foreign markets, they may be able to recover their money substantially without loss. Where, as in Germany, the blocked funds can only be used for long-term investment, for tourists' expenditures, or for so-called "additional exports" (exports which would not normally be marketed abroad), buyers may be very difficult to find. Since "additional exports" can usually find a market only at a considerable price reduction, and since the German exporter is naturally unwilling to sell at a loss, the full German price in marks is paid for the exports, but the foreign importer is permitted to acquire them at a discount. (In Germany, this discount has run from 20 to 50 per cent on the various types of blocked marks.) Thus the owner of blocked accounts may suffer a substantial loss, which may be preferable, however, to investment in risky long-term securities in the debtor country or to prolonged freezing of the amounts due.

CONSEQUENCES OF TRADE RESTRICTIONS

✓ Faced with rising tariff barriers, stringent import quotas, and rigorous foreign exchange controls, not to mention constant multiplication of the various annoying devices of administrative protection, world trade suffered in the early 1930's what is probably the most severe and sharp decline in history. The chart on page 398 tells the story vividly, depicting the value of total world trade between January, 1929, and June, 1933, as a constantly contracting spiral in which the figure for every single month is considerably less than for the corresponding month of the preceding year. In the short period of four years, between January, 1929, and January, 1933, the value represented by international commerce declined by two-thirds.

A similar picture is provided in the table on the next page in which are presented index numbers of the physical volume, of prices, and of the total value of world trade.

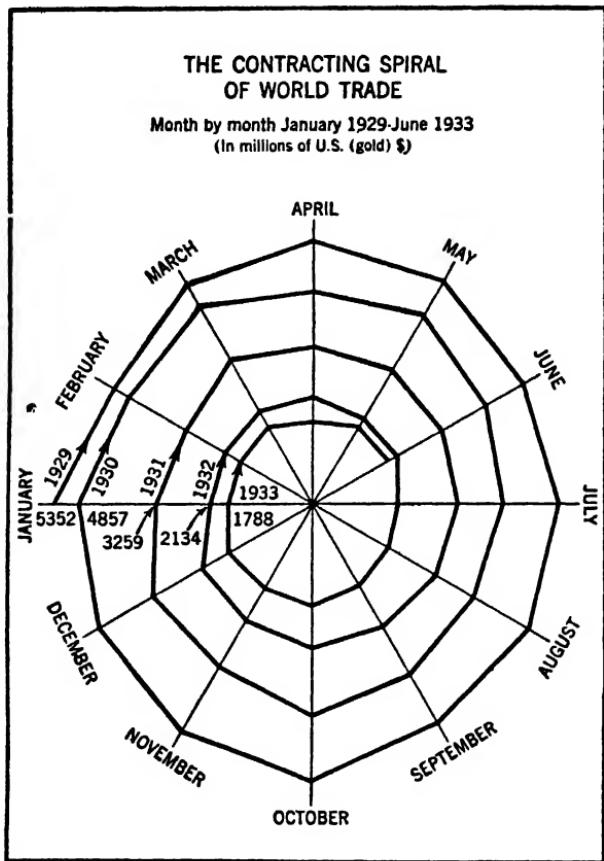


FIGURE V

Reprinted by permission from *World Economic Survey, 1932-33*, League of Nations Publications, II. Economic and Financial, 1933, II. A. 16.

It will be seen that the gold value of trade declined without interruption until 1934, when it was approximately one-third of the 1929 figure. Since by 1932 more countries were off the gold standard than were on it, in 1933 being joined by the United States, values in terms of a relatively stable paper currency are more significant. For this reason, sterling

values are also given. These indicate a cessation of the decline in 1934, with a low point of about one-half the 1929 values reached in 1933.

INDICES OF QUANTUM, PRICES, AND VALUE OF WORLD TRADE, 1929-35
(1929 = 100)

Year	Quantum	Gold Prices	Gold Value	Sterling Prices	Sterling Value
1929	100	100	100	100	100
1930	93	87	81	87	81
1931	86	68	58	73	62
1932	75	53	39	73	54
1933	76	47	35	69	52
1934	79	43	34	70	55
1935	82	42	35	71	58

Source: *Review of World Trade*, 1935, p. 10 (League of Nations Publications, II. Economic and Financial, 1936. II. A. 14). "Quantum" represents quantities weighted by prices in the base year. Figures for 1935 exclude Italy for December quarter; amounts unknown.

It is worthy of note that the physical volume or quantum of trade fell considerably less than its value, a low of 75 per cent of the 1929 volume having been attained in 1932. The difference between the two measures is explained, of course, by the fact that the reduced quantity of goods traded was being exchanged at steadily falling prices. The value figures, especially those for sterling values, are the most significant, since it is values that determine the profitability of production as well as the place of commodity trade in the various balances of payments.¹

It would, of course, be unjust to blame increased trade restrictions for the entire decline in trade that has taken place.

¹ Since the value indices cited in the foregoing table apply to total world exports and imports, they furnish only the most general impression of what has been happening with respect to the balances of payments of particular countries. For any single country, what is important in this connection is the relative changes in the value of exports and imports in terms of the national currency. Naturally, since both price and quantity changes have varied widely for different commodities, the balances of payments of the various countries have been affected very differently. Calculations of these changes for the more important countries are to be found in recent issues of the *World Economic Survey*.

Even in their absence, both the volume and the value of international commerce would have shrunk severely in the face of the world-wide depression. It seems axiomatic, however, that the shrinkage of trade has been greatly intensified and its recovery seriously retarded by the network of obstructions that has arisen.

Closely related to the decline in commodity trade are two other phenomena of the period. These are the steady accumulation of stocks, especially of foodstuffs and raw materials, and a growing disparity of prices between different countries. As the customary markets were more and more encircled by manifold restrictions, the disposal of goods became increasingly difficult and led to a piling up of stocks.

WORLD PRODUCTION, PRICES, AND STOCKS

	Production				Prices		Stocks			
	1929	1930	1931	1932	Feb. 1929	Feb. 1933	1929	1930	1931	1932
Primary commodities .	106	103	98	95			124	158	183	194
Industrial activity (excl. U.S.S.R.)	110	94	81	69						
Coffee, tea, cocoa .	120	95	110	102	101	46	149 ^a	243 ^a	259 ^a	284 ^a
Rubber . . .	132	125	122	108	50	6	129	183	230	262
Silk, raw . . .	113	110	107	101	86	20	116	174	193	193
Wool . . .	104	101	100	100	116	32				
Wood pulp .	117	114	104	98	106	42				
Pork, etc. . .	106	104	111	110	78	33				
Rye . . .	100	107	91	103	118	39				
Wheat . . .	96	109	104	102	87	32	150	155	167	163
Cotton . . .	100	97	103	89	114	35	103	127	151	161

^a Coffee only.

NOTE: The price indices of silk, wool, pork, and cotton are averages of three quotations; of wheat, of two quotations. Production and stocks, 1925-29 average = 100; prices, 1926 = 100.

Sources: *World Production and Prices, 1925-33* (League of Nations Publications, II. Economic and Financial, 1934. II. A. 13).

World Economic Survey, 1932-33 (League of Nations Publications, II. Economic and Financial, 1933. II. A. 16).

This was particularly noticeable in the more competitive lines of production (foods and raw materials) where production was only very slowly reduced in response to price declines, even in some instances expanding. The table on the opposite page tells the story.

While the accumulation of stocks in the face of continuing production had a disastrous effect upon the prices of agricultural products and crude materials, this effect was by no means evenly spread. The segregation of markets wrought by trade restrictions shattered the world interdependence of prices and brought about the greatest disparity in their movement. Striking evidence of this phenomenon is provided by the accompanying table, which shows the price of wheat in various national markets before and during the depression.

DOMESTIC PRICES OF WHEAT IN VARIOUS COUNTRIES,
JANUARY, 1929 AND JANUARY, 1932

	<i>In U. S. Cents per Bushel of 60 lbs.</i>	
	<i>January 1929</i>	<i>January 1932</i>
Argentine	113	44
Canada	120	51
Great Britain	123	53
United States	121	58
India	158	60
Hungary	158	60
Poland	140	81
Sweden	137	91
Austria	131	120
Czechoslovakia	147	121
Germany	135	147
Italy	192	151
France	164	179

Source: *World Economic Survey, 1931-32*, p. 137 (League of Nations Publications, II. Economic and Financial, 1932. II. A. 18).

Although there was a difference of more than 70 per cent between the lowest and the highest price in 1929 (primarily due to the high Italian tariff), this is small compared with the

Even in their absence, both the volume and the value of international commerce would have shrunk severely in the face of the world-wide depression. It seems axiomatic, however, that the shrinkage of trade has been greatly intensified and its recovery seriously retarded by the network of obstructions that has arisen.

Closely related to the decline in commodity trade are two other phenomena of the period. These are the steady accumulation of stocks, especially of foodstuffs and raw materials, and a growing disparity of prices between different countries. As the customary markets were more and more encircled by manifold restrictions, the disposal of goods became increasingly difficult and led to a piling up of stocks.

WORLD PRODUCTION, PRICES, AND STOCKS

	Production				Prices		Stocks			
	1929	1930	1931	1932	Feb. 1929	Feb. 1933	1929	1930	1931	1932
Primary commodities .	106	103	98	95			124	158	183	194
Industrial activity (excl. U.S.S.R.)	110	94	81	69						
Coffee, tea, cocoa .	120	95	110	102	101	46	149 ^a	243 ^a	259 ^a	284 ^a
Rubber . . .	132	125	122	108	50	6	129	183	230	262
Silk, raw . . .	113	110	107	101	86	20	116	174	193	193
Wool . . .	104	101	100	100	116	32				
Wood pulp . . .	117	114	104	98	106	42				
Pork, etc. . .	106	104	111	110	78	33				
Rye . . .	100	107	91	103	118	39				
Wheat . . .	96	109	104	102	87	32	150	155	167	163
Cotton . . .	100	97	103	89	114	35	103	127	151	161

^a Coffee only.

NOTE: The price indices of silk, wool, pork, and cotton are averages of three quotations; of wheat, of two quotations. Production and stocks, 1925-29 average = 100; prices, 1926 = 100.

Sources: *World Production and Prices, 1925-33* (League of Nations Publications, II. Economic and Financial, 1934. II. A. 13).

World Economic Survey, 1932-33 (League of Nations Publications, II. Economic and Financial, 1933. II. A. 16).

This was particularly noticeable in the more competitive lines of production (foods and raw materials) where production was only very slowly reduced in response to price declines, even in some instances expanding. The table on the opposite page tells the story.

While the accumulation of stocks in the face of continuing production had a disastrous effect upon the prices of agricultural products and crude materials, this effect was by no means evenly spread. The segregation of markets wrought by trade restrictions shattered the world interdependence of prices and brought about the greatest disparity in their movement. Striking evidence of this phenomenon is provided by the accompanying table, which shows the price of wheat in various national markets before and during the depression.

DOMESTIC PRICES OF WHEAT IN VARIOUS COUNTRIES,
JANUARY, 1929 AND JANUARY, 1932

	In U. S. Cents per Bushel of 60 lbs.	
	January 1929	January 1932
Argentine	113	44
Canada	120	51
Great Britain	123	53
United States	121	58
India	158	60
Hungary	158	60
Poland	140	81
Sweden	137	91
Austria	131	120
Czechoslovakia	147	121
Germany	135	147
Italy	192	151
France	164	179

Source: *World Economic Survey, 1931-32*, p. 137 (League of Nations Publications, II. Economic and Financial, 1932. II. A. 18).

Although there was a difference of more than 70 per cent between the lowest and the highest price in 1929 (primarily due to the high Italian tariff), this is small compared with the

spread of from 200 to 300 per cent in 1932. Conspicuous also is the actual price rise that took place in Germany and in France, even in the face of the depression.

Fortunately, since 1932 some progress has been made, through the absorption of stocks, a reduction in output, business recovery, and some loosening of the restrictions, so that these price disequilibria are becoming less severe. Even in 1937, however, considerable price differentials still existed in important countries.

✓ It is the newer trade restrictions, such as quota systems and the rationing of foreign exchange, that are primarily responsible for the great disparities in prices of which we have given some indication. For they impose a direct limitation upon imports which cannot be avoided by price changes, as is the case when there is a tariff to be surmounted. Indeed, the essence of these restrictions is the replacement of the automatic mechanism of supply and demand by arbitrary quantitative regulations. How far the normal forces of the market may be pushed aside is well illustrated by the following extreme case:

Fantastic examples occur from time to time of the curious transactions rendered possible by the complicated network of export bounties, quotas and import duties. Thus one calculation which obtained wide publicity early in 1934 concerned a transaction by which, utilising the Italian export bounty, and the special preferential transport rates between Italy and Austria, a merchant was said to have made a profitable sale of wheat at a negative price, paying his customer to accept the wheat so that he might have the documents with which to collect the export premium. Whether such a transaction actually occurred or not, the calculation illustrates the degree to which prices have been interfered with by Government action in neighbouring markets.¹

We have already seen how capital embargoes, transfer moratoria, and blocked accounts have rendered the international movement of capital exceedingly difficult. The result has been not only that a large volume of existing debt

¹ *World Economic Survey, 1933-34*, p. 207 (League of Nations Publications, II. Economic and Financial, 1934. II. A. 16).

has been frozen for some time to come, but also that current long-term lending, upon which a large volume of trade has always depended, has been brought almost to a standstill. Capital cannot move from the countries imposing restrictions, and because of this, it will not move into them from the normal lending countries. The flow of capital in recent years has been almost entirely confined to short-term movements between countries which have not introduced exchange restrictions and to the purchase by nationals of such countries of American securities, as a hedge against war and currency depreciation.

Probably more important from the long-run point of view than any of the consequences so far listed is a world-wide shift in the structure of production to which the strangulation of trade has naturally given rise. Agricultural countries, faced with great difficulty in disposing of their normal exports abroad and thus in acquiring needed manufactured articles, have undertaken — behind obstructions of one sort or another — to produce these commodities themselves. How far this tendency has developed in the Argentine, to cite only one of the numerous possible illustrations, is indicated by the following extracts from the April, 1936, report of the Department of Overseas Trade of Great Britain:

According to official estimates the number of workers engaged in all kinds of manufacturing activities is nearly twice the number engaged in agriculture and stockbreeding, representing an increase since 1914 of 73 per cent, against an increase in farming of 29 per cent. . . . The number of cotton spindles in the Republic in 1936 is expected to be five times as large as in 1930, producing some 20 million kilogrammes of yarn. A less rapid development has occurred in the production of cotton piece goods, but every effort is being made to increase the 20 per cent share of the total consumption which is at present locally provided. National mills supply practically the whole of the cotton knitted wear. . . . The manufacture of woven silk goods has doubled in the past five years. Domestic factories produce nearly one-third of the country's requirements of paper and cardboard, output having increased by 50 per cent since 1931 and the total value exceeding that of either cotton or woollen textiles. Two new cement

factories are being built in the provinces, although 93 per cent of the consumption was already provided locally in 1934 by the existing factories, working well within their capacity. The development of the rubber goods industry is illustrated by the fact that imports of raw rubber increased nearly eightfold between 1930 and 1934, while the importation of manufactured rubber articles dropped to less than half. . . . Local production of manufactured articles has hitherto been limited to supplying home needs only, but a commencement has been made in the exportation on a large scale to neighboring countries of shoes, hats, ice chests and electric motors. . . . The total number of workers in all the manufacturing and extractive industries was estimated in 1933 at 2,156,000 representing 43 per cent of the total employed, while 1,137,000 or 23 per cent were engaged in agriculture and live stock breeding; commerce, transport, and other occupations accounting for the rest.¹

Changes in the opposite direction have been taking place in the industrial countries of Europe. Unable, because of restrictive measures in other parts of the world, to market their manufactured goods and with the proceeds to purchase needed foodstuffs and raw materials, they have increasingly diverted capital and labor into agricultural production. Barring the planned economy of Soviet Russia, this development has doubtless gone farthest in Germany, where every effort is bent toward increasing the output of every agricultural essential, but particularly of oil-bearing products such as rape seed and linseed, and where it is even hoped that the production of a synthetic substitute will soon render the nation independent of outside supplies of raw rubber (at many times the cost of the latter).

By this parallel drive for self-sufficiency in both agricultural and industrial countries, international specialisation, the very basis of international commerce, is being, if not utterly destroyed, at least seriously curtailed. This negation of international cooperation is certainly the chief factor in the explanation of the slow revival of foreign trade relative to

¹ Cited in a paper by Marcus Nadler, "Economic Interdependence, Present and Future," in the *American Economic Review, Supplement*, Vol. XXVII, No. 1 (Mar., 1937), pp. 3-4.

the recovery in industrial activity in many countries. The following tables offer eloquent testimony on this point.

	Index of Industrial Production (1929 = 100)				Index of Foreign Trade (Values in National Currencies: 1929 = 100)							
					Imports				Exports			
	1932	1933	1934	1935	1932	1933	1934	1935	1932	1933	1934	1935
Great Britain .	84	88	99	106	59	56	61	63	50	50	54	58
Germany . .	53	61	80	94	35	31	33	31	45	39	33	34
United States .	54	64	66	76	31	33	38	47	31	32	41	44
Italy . . .	67	74	81	92	38	34	35	35	45	39	34	33
Sweden . . .	90	96	116	127	65	62	73	82	52	60	72	71
Belgium . . .	69	71	72	81	46	42	39	48	47	44	43	50
Denmark . . .	91	105	117	121	64	71	76	74	67	72	73	75

Source: Nadler, *op. cit.*, p. 5. The 1935 indices of imports and exports for Italy represent only the first nine months. The indices of foreign trade for Belgium are for Belgium and Luxemburg combined.

Whether this trend toward economic isolation and self-sufficiency is to continue until international trade is reduced to an unavoidable minimum, or whether a swing back towards interdependence will develop, remains to be seen. Certain recent developments, notably the Trade Agreements program of the United States, the relaxation of certain quotas and tariffs by France following devaluation by the gold bloc in September, 1936, and the *de facto* currency stabilisation agreement thereafter established between Great Britain, the United States, and the gold bloc countries (France, Switzerland, and Holland), offer a check to the spread of economic nationalism. It is possible that these developments, perhaps followed by others of a similar character, may actually reverse the current trend. Against this hope, however, is to be set the continued fear of war in Europe and the zeal for military preparedness that it engenders. As long as this fear exists, it would be unwise to expect too much. People in constant fear of attack cannot be expected to be good cosmopolitans. When we add to nationalism bred of the war danger the pressure of the vested interests that have been created and are being

strengthened by existing trade restrictions, and consider the fact that many countries are still in a weak financial position, the outlook is not especially promising for the internationally minded. It seems safe to conclude with Professor Nadler that the "economic interdependence of nations in the future is bound to be on a smaller scale than prior to the depression." At the very least, even assuming no further intensification of nationalist sentiment, the world economy has been given a twist which will alter its course of development for a long time to come.

SUGGESTED REFERENCES

Haight, F. A., *French Import Quotas* (P. S. King & Son, London, 1935).

International Economic Relations, Report of the Committee of Inquiry into International Economic Relations, University of Minnesota Press, 1934, pp. 51-54; pp. 315-321.

Einzig, Paul, *Exchange Control* (Macmillan & Co., London, 1934).

Ohlin, Bertil, "Mechanism and Objectives of Exchange Control," *American Economic Review*, Vol. XXVII (1937), Supplement, pp. 141-150.

Feiler, Arthur, "Current Tendencies in Commercial Policy," *American Economic Review*, Vol. XXVII (1937), Supplement, pp. 12-28.

Nadler, Marcus, "Economic Interdependence, Present and Future," *American Economic Review*, Vol. XXVII (1937), Supplement, pp. 1-11.

Hall, N. F., *The Exchange Equalisation Account* (Macmillan & Co., London, 1935).

World Economic Survey, 1931-32, especially Chapters V, IX, League of Nations, 1932.

World Economic Survey, 1932-33, especially Chapter VII, League of Nations, 1933.

World Economic Survey, 1933-34, especially Chapter VI, League of Nations, 1934.

World Economic Survey, 1934-35, especially Chapter VI, League of Nations, 1935.

World Economic Survey, 1935-36, especially Chapter VI, League of Nations, 1936.

World Economic Survey, 1936-37, especially Chapter VI, League of Nations, 1937.

International Economic Reconstruction (Professor Ohlin's report), Carnegie Endowment: International Chamber of Commerce, Paris, 1936.

CHAPTER IX

CLEARING AGREEMENTS

IN the intensification of trade and monetary restrictions of recent years something very like a law of progressive expansion appears to have been at work. Obstacles set up in one part of the world have led to the erection of similar obstructions elsewhere, while the spread of one type of restriction has been followed by the introduction of new and more drastic forms of governmental interference. Thus various industrial nations, in the face of rapidly declining agricultural prices, raised tariffs, established quotas, and took other steps to check a sudden influx of agricultural imports, both to protect domestic producers and to safeguard the balance of payments against adverse change. Such action, by shutting off the markets of the countries producing foodstuffs and raw materials and thereby upsetting the equilibrium of their balances of payments, led them to adopt similar policies toward imports of manufactures. Each step in the direction of increasing the barriers to trade brought nearer the stage when, somewhere, a definite shortage of foreign exchange would appear. Manufacturing nations, in particular, must have raw materials. If their ability to sell finished goods is seriously impaired, then unless they have significant additional means of acquiring foreign purchasing power, limitations on the disposal of the inadequate amounts available will eventually become necessary. Thus brought nearer, exchange control became imperative wherever, as in Germany, to the normal demand for imports was added the 'pressure of payments to foreign creditors. The only alternative would have been the solution (adopted by Great Britain and a number of other powers) of abandoning the gold standard

and permitting fluctuations in exchange rates to bring about the needed adjustment in the balance of payments, an alternative which because of the fear of inflation and of increasing the burden of the external debt could not be followed by some countries.

While exchange control provided a solution for the more pressing problems of the debtor states, once it was introduced it intensified the difficulties of the creditor nations. Not only were their exports (principally manufactured commodities) severely restricted and existing financial claims tightly frozen, but also even current commercial claims rapidly became uncollectible. For the available exchange, where under control, was allocated to the purchase of essential requirements; inevitably less important imports, if permitted at all, would have to wait for payment. Faced with the alternatives of seeing their trade with debtor countries reduced to the vanishing point or of continuing it only on the basis of long-term credits, it is not surprising that a new type of trading relationship that would permit collection of current claims, as well as some repayment of outstanding financial obligations, found a vigorous welcome among creditor nations. First introduced in November, 1931, by Switzerland and Hungary to serve just these purposes, clearing agreements rapidly came into widespread use. Though originally designed to bring some sort of order into the commercial relations of creditor and debtor countries (or countries with uncontrolled and with controlled exchanges), the latter group also entered into clearing agreements with one another. By 1936 Germany, whose rigorous exchange control predisposed her to adopt clearing systems as a means of acquiring essential imports, handled 60 per cent of her trade through this mechanism. Let us now examine the nature of this new form of trade relationship.

A clearing agreement is essentially a method of divorcing the exchange markets of two states while yet permitting the continuance of commercial intercourse. The ordinary method of making international payments by the purchase and sale

of bills of exchange in the market (or from the Central Bank in a controlled exchange country) is supplanted by an almost complete severance of banking relations and the establishment of a self-contained payment mechanism in each contracting country. According to the terms of a clearing agreement, importers in each country pay into a special office (usually the Central Bank) all sums due for imports. From the funds thus received, each clearing office pays exporters for goods shipped to the other country. Provision is also usually made for the use in the creditor country of part of the in-payments to liquidate frozen commercial and financial claims against the other party, since their immobilisation was the immediate cause of the introduction of clearing agreements. Sometimes, as in the Swiss-German agreement, payments for tourists' expenditures are also covered, as well as other special items.¹ In most agreements a definite percentage of balances not required by the creditor nation to pay for exports is reserved for the liquidation of blocked claims, while another portion is put at the free disposal of the debtor.

It is apparent that for a clearing agreement to operate successfully from the point of view of a creditor country, that is, for it to permit the liquidation of blocked claims, *the creditor nation must have an adverse balance of trade with the other contracting party*. If its exports exactly equal its imports from the debtor country, current commercial claims are cancelled, but there is no basis for wiping out old claims. On the other hand, if exports are larger than imports, the indebtedness of the debtor nation increases. Only if imports exceed exports will payments into the clearing office exceed out-payments on trading account, leaving a balance available for the service or settlement of outstanding debts.

Unfortunately, however, the very operation of the clearing system tends to destroy such an adverse balance. In the first

¹ In the agreement cited, payments for imports into Switzerland of German coal are earmarked for the expenditure of German tourists in Switzerland. *Enquiry into Clearing Agreements*, p. 29 n. (League of Nations Publications, II. Economic and Financial, 1935. II. B. 6).

place, traders in the country with controlled exchanges tend to increase their purchases from the agreement country, since with respect to imports from that source no foreign-exchange problem exists. No permits to buy foreign exchange are required, each such transaction being settled by payment in domestic currency to the clearing office. On the other hand, traders in the creditor country, feeling relieved of the possibility of seeing their claims become uncollectible, are stimulated to expand their business. Second, exports from the debtor state may be handicapped. This will occur when, as is often the case, the official exchange rate used by the clearing office is set at an artificially high level for the controlled exchange currency, with the result that it is overvalued. As we saw in the last chapter, the very purpose of exchange control in countries with weak currencies is to maintain the foreign value of the currency. Under free exchange conditions, balance-of-payments equilibrium could only be established if prices in such countries were deflated or if their exchange rates fell.¹ With high prices and high exchange rates as well, exports inevitably suffer. Finally, a creditor's adverse trade balance also tends to disappear because of frequent evasion of the clearing system by exporters in the controlled-exchange country. Freely disposable foreign exchange (*i.e.*, foreign exchange which may be freely used in any market) is very difficult to acquire. Yet its possession is exceedingly desirable because it permits one to purchase commodities not obtainable through the restricted channels of trade, also because it enables one to build up balances or investments abroad which may be subject to less risk than domestic assets. For this reason exporters in a country with exchange control will often quote a fictitiously low value on invoices of goods, stipulating that their customer abroad pay the difference into a foreign bank, or they may ship goods on consignment to branches in free-exchange countries, with payment made to a foreign bank, or they may

¹ For various examples of stipulations as to exchange rates, see the *Enquiry into Clearing Agreements*, pp. 31-32.

extend long-term credit to customers in the hope of improvement in the foreign-exchange situation. All these and numerous other types of evasion of the clearing system reduce the volume of in-payments to the clearing office in the creditor country, and therewith the balance available for the service or liquidation of debt.

As a partial offset to these forces tending to reduce an adverse trade balance, there is the realisation by creditor countries that the discharge of debts by debtor nations depends on their ability to sell goods and services, that an adverse balance of trade may actually be advantageous. Appreciation of this fact has at times acted as a stimulus to imports. So far as it does, increasing exports are counteracted by increasing imports, with gratifying results to trade. A given adverse balance may be maintained, however, in the face of expanding exports, not only by a rise in imports but also by a restriction of exports. And while the desire for a larger volume of exports may be strong, the prejudice against an increase of imports may be even stronger; limitation of exports may be the means chosen to maintain an adverse trade balance.¹ This solution has actually been adopted by a number of countries. France has imposed artificial restrictions on her exports to Germany and other nations with rigid exchange controls in order to retain the advantages of an adverse balance of trade, while many clearing agreements specify the continuance of a fixed ratio between exports and imports. Thus under the 1934 agreement between Belgium and Germany exports between Belgium (and Luxemburg) on the one hand and Germany on the other are fixed at the ratio of 62.5 : 100.²

From the side of the debtor countries also, various devices to offset the tendency toward (from their point of view) a less favorable balance have been introduced. For them, the prompt payment of commercial claims is the necessary condi-

¹ It is interesting that the thoroughly anti-Mercantilist conclusion, that an unfavorable balance of trade is really favorable, should lead to trade restrictions (on exports) of an equally thorough anti-Mercantilist type because of a lingering Mercantilist prejudice against imports.

² *Op. cit.*, p. 46 n.

tion of continued trade, while the servicing and repayment of financial obligations is essential to the maintenance of their credit in the world's capital markets. To prevent clearing arrangements as well as steady pressure on their balances of payments from worsening their weak position, debtor countries have introduced, in addition to import restrictions, various offsetting devices. Stimulation of exports by bounties is widespread. As with many other types of intervention, this measure has been carried farthest in Germany, where in June, 1935, a turnover tax of 2 to 3 per cent was imposed on domestic sales of industrial products and on the consumption of gas and electricity, the proceeds (some 700-800 million marks annually) being turned over to exporters by the Golddiskontbank. Clearing offices have also in some cases been granted the right to fix a rate of exchange below the high official rate. Again, private (and public) compensation agreements have been permitted as a supplement to clearing systems. These are nothing but a refined form of barter, whereby exports as well as imports are assured. Freedom to determine the rate of exchange is generally accorded the parties to such an arrangement, who thereby avoid the effects of an overvalued rate.

Thus, the Turkish Ministry of Economy and an Austrian tobacco company entered into an arrangement on November 17th, 1932, by which the company agreed to buy, up to the end of June 1933, Turkish tobacco to the value of twenty million French francs, payable in Austrian merchandise. The Swedish Government made a similar arrangement with Greece to import Greek tobacco to the value of \$400,000, 20 per cent of which sum was to be written off the Greek debts in Sweden, the remaining 80 per cent being paid for in Swedish goods. Other examples are the compensation agreement between Hungary and Czechoslovakia of December 22nd, 1932, by which 29,000 Hungarian pigs are to be exchanged for 20,000 wagons of Czechoslovak wood fuel, and Hungarian eggs and similar products to the value of one-and-a-half million crowns are to be paid for by facilities accorded to Hungarian tourists in the Czechoslovak thermal stations. Similar barter agreements might be cited between European and also South and North American countries. For example, in August, 1931, the Brazilian Government concluded an agreement with the

Grain Stabilization Corporation and the Bush Terminal Company of New York for the exchange during eighteen months of 1,275,000 sacks of coffee against 25,000,000 bushels of wheat. In consequence of this agreement, Brazil prohibited the import of wheat flour for eighteen months.¹

We have noted the tendency of clearing agreements to stimulate increased purchases by a country with controlled exchanges from the other parties to such agreements. This is merely one aspect of a still broader tendency: namely, the promotion of a growing distortion of trade from its normal channels, in particular, of a trend toward bilateralism in trade relations. Any balance accruing to one party to an agreement (e.g., a debtor country, in particular), even if not blocked for financial payments, still provides no free exchange which can be used to make purchases in the markets of third countries, but must be used in the country where it accumulates.² When, as is often the case, such a country is not the best market in which to buy, uneconomic purchases may result, simply because purchasing power is available there, but exceedingly difficult to come by in the cheaper markets. Thus, for example, "Germany in 1935 paid about 45 per cent above the world price for an inferior grade of wool imported from Chile under the existing clearing arrangement between the two countries."² Moreover, in order to acquire free foreign cur-

¹ *World Economic Survey, 1932-33*, p. 200 (League of Nations Publications, II. Economic and Financial, 1933. II. A. 16).

² Nadler, *op. cit.*, p. 6. The following citation is also of great interest in this connection: "Average prices paid by Germany for raw materials imported rose, while the tendency in the world market was to fall. The following figures show the percentage change between the first and third quarter of 1934 in the average prices (in terms of gold) paid for raw materials imported by the United Kingdom, France, Germany and Italy: *

Percentage Increase (+)
or Decrease (-),

United Kingdom	- 2.0
France	- 16.7
Germany	+ 4.0
Italy	- 8.9

"The reduction in the purchase by Germany of oversea raw materials, due to the diversion of her demand to the countries with which she had concluded

* Basis: Official import price indices, calculated by variable weighting, according to the quantities of different goods entering into imports.

rency in countries with which clearing agreements have not been concluded, imports from these sources are restricted to the barest essentials. Such direct restrictions, together with the diversion of purchases to parties to the clearing system, have operated greatly to the disadvantage of third countries. This tendency is illustrated by the following figures for German trade in the third quarter of 1933 and 1934:

Trade with:	1933		1934	
	Imports (RM 000,000)	Exports	Imports (RM 000,000)	Exports
I. Twenty-one European countries with which clearing or compensation agreements are concluded	456	831	525	719
II. Other countries	588	399	533	287

Source: *Enquiry into Clearing Agreements*, p. 44.

While imports from countries within the clearing system were 15 per cent higher than in 1933, imports from other countries were 9 per cent lower. Although exports to both groups fell, the decline in exports to non-clearing countries was relatively greater, being 28 per cent as against 14 per cent to the first group of countries.

Triangular trade in particular has been made increasingly difficult, in the face of the trend toward bilateralism. The *World Economic Survey* for 1935-36 presents figures which indicate, for a group of nations conducting some 75 per cent of world trade, that between 1929 and 1935, strictly bilateral trade increased from 71.7 per cent of total trade to 74.2 per cent.¹

clearing agreements, naturally contributed to the fall in world market prices and thus affected adversely the economic situation of the world as a whole.

“According to the Hungarian reply to the questionnaire sent out, the effect of her clearing agreements on the internal economic situation has mainly taken the form of increasing difficulty in procuring raw materials from countries with which Hungary has no agreements — a difficulty which has had an unfavorable effect on industrial production and on the export of manufactured articles.

“In the Bulgarian reply, it is pointed out that the necessity of importing from countries with which clearing agreements were concluded checked imports from other countries.” (*Enquiry into Clearing Agreements*, pp. 45-46.)

¹ P. 182. Triangular trade declined from 15.5 per cent to 13.8 per cent. The remainder of the total is attributed to “Balances of Total Trade.” For an explanation of the computations, see the reference.

It should be noted that these figures relate to total trade. The reduction

This development may be attributed principally to clearing and compensation agreements.

The reduction of triangular trade is serious, not only because the countries affected lose some of the advantages of international specialisation, but also because their difficulties in meeting certain invisible items in their balances of payments are intensified. In particular, the problem of debtor nations in meeting capital charges on their borrowings may be made more serious. In many cases, a borrowing country pays the interest on its international loans not by direct exports to the lending nation, but by exports to some third country. If the introduction of clearing agreements affects adversely the export trade of this third country, it may be forced to reduce its purchases from the debtor nation, which will now have less foreign exchange available for the service of its foreign debt. The latter country may then be forced to introduce or to extend trade restrictions, or it may have to establish a clearing arrangement with its creditor. Either the total volume of trade will be still further reduced, or the creditor nation will be obliged to buy goods it really does not want, or which it could buy cheaper elsewhere, in order to permit the debtor country to continue interest payments.

A further effect of clearing systems, correlative with the drift toward bilateral trade relations, is the depressing influence they exert on world prices.

Their restrictive effect on trade limits possibilities of sale and, faced with the partial or complete closing of their outlets, the countries which are not parties to clearing agreements are gradually led to reduce the prices of their goods in order to sell them. These agreements thus reduce the volume of trade and the prices at which trade is conducted; they reduce the ability of debtor countries to meet those very financial obligations which gave rise to exchange control and subsequently to the introduction of clearing agreements.¹

in multilateral trade was far greater in countries with comprehensive quota systems. "In Switzerland, for instance, the relative importance of multilateral trade has fallen to one sixth of its former figure." (Report of Professor Ohlin, in *International Economic Reconstruction*, p. 96.)

¹ *Enquiry into Clearing Agreements*, pp. 16-17.

Before attempting to arrive at a judgment as to the relative merits and demerits of clearing agreements, it will be well, since most of the evidence so far introduced has been unfavorable, to consider the arguments advanced by one of their staunchest advocates. Dr. Paul Einzig lists the advantages of the clearing system as follows:

- (1) It enables financially weak debtor countries to buy from each other and from financially strong countries.
- (2) It enables weak and strong countries alike to sell to weak countries and to collect the purchase price.
- (3) It tends to reduce obstacles to foreign trade, such as exchange restrictions, quotas, prohibitive tariffs, and import embargoes.
- (4) It tends to increase foreign trade by balancing imports and exports between two countries in an upward direction.
- (5) It tends to reduce dumping by making it desirable for the exporting country to import something in return for its sales abroad.
- (6) It tends to discourage exchange dumping through a depreciation race, by making it evident that the country with a depreciating currency has to export more to pay for the same amount of imports.
- (7) It facilitates the payment of old external debts in the form of exports to the creditor countries.
- (8) Above all, it creates a more conciliatory spirit between Governments in their international commercial relations.¹

The first two points must, in part, be granted. Some, though by no means all, of the trade that takes place under clearing agreements could not, in the circumstances of recent years, have been carried on without their aid. By making it unnecessary for traders in financially weak countries to buy foreign exchange, it has been possible for them to increase their imports from countries within the clearing system. At the same time, however, as the evidence indicates, purchases from third countries have tended to decline. Moreover, even in the absence of clearing agreements, some of the trade which occurred under these arrangements would still have been permitted. Certainly, however, it is true that the problem of collecting commercial claims has been rendered easier.

¹ Einzig, *op. cit.*, pp. 140-141.

That the clearing system tends to reduce obstacles to international trade is a contention that cannot be established. So far as concerns the parties to a clearing agreement, exchange control is rendered unnecessary simply because the clearing system itself totally abolishes the foreign exchanges. It is, indeed, quite as drastic a form of intervention as the most rigorous exchange control. Instances can be cited of relaxations of import quotas between clearing partners, but these are few in number, hardly sufficient to establish a definite tendency. With respect to third countries, Dr. Einzig argues that clearing should permit a liberalisation of trade policy by financially weak countries.

For an increase of imports from a country with Exchange Clearing Agreements does not cause any additional pressure on the exchange of the importing country. On the contrary, in so far as these imports take the place of those from other countries, for which the purchase of foreign currencies would have been necessary, the pressure on the exchange is relieved. Thus, if the exchange of a country is safeguarded by a number of Exchange Clearing Agreements, its Government can afford to be more liberal also towards the imports from countries with which it has no Exchange Clearing.¹

This argument overlooks the fact that, even though trade with a clearing partner may increase, the available imports may not be the kind most needed. In part, these may be obtained from the clearing partner, who first imports them from their source. In such case, they are secured at a high price and also probably in insufficient quantity. Since the need for them still remains, and since clearing arrangements do nothing to provide free exchange which can be used in third countries, exchange controls and import restrictions must still continue, so that the available exchange may be used for the most essential purposes. The figures cited on page 413 are relevant to this point.

Whether clearing agreements operate to balance imports and exports between the clearing partners in an upward

¹ *Ibid.*, pp. 141-142.

direction depends in each case upon surrounding circumstances. This outcome is by no means a general rule. If the official exchange rate is not set too high, if each party is equally willing to see its imports as well as its exports increase, and if a wide range of desirable commodities is available in each market, an upward balancing of imports and exports may occur. When these necessary conditions are absent, no such result is to be expected. In any event, an increase in trade between clearing partners may be offset (as in the cases cited) by a decrease in trade with third countries, with the net result that *total* trade is negligibly or even adversely affected. The fact that the share of world trade of the sterling group of countries increased in 1935, while that of gold-standard countries (including Germany) declined, points to the removal of restrictions and artificial trading methods as an effective means of stimulating international commerce. For the sterling countries have introduced comparatively fewer restrictions and clearing agreements than the other group.¹

The statements with respect to dumping and exchange dumping are extremely dubious. If, as is true of many of the clearing agreements covering the trade between financially weak countries (e.g., Germany and the states of southeastern Europe), these arrangements are entered into for the express purpose of permitting an increase of imports, it is not apparent why dumping or other artificial means of increasing exports should be discouraged. Indeed, the spread of the clearing system has probably tended to stimulate such measures, as a method of providing the wherewithal to pay for the increased imports. There has been a tendency toward the lowering of

¹ The relative increase in the trade of the sterling group (chiefly Great Britain, her Dominions, and the Scandinavian countries) is not to be attributed to currency depreciation, since their exchanges were comparatively stable during 1935. "In view of the exchange stability of those countries among themselves and *vis-à-vis* the gold-standard countries in 1935, it seems probable that their advantage now consists mainly in their freedom from extraordinary trade restrictions." *World Economic Survey, 1935-36*, p. 179 (League of Nations Publications, II. Economic and Financial, 1936. II. A. 15). See the interesting chart accompanying this citation, which furnished the basis for the position taken here.

the official exchange rates on the more seriously overvalued currencies, and toward a wider use of compensation arrangements, where the parties concerned determine the exchange rate to be used.

It cannot be denied that the seventh advantage claimed by Dr. Einzig, the facilitation of the payment of old external debts, has been realised in practice. This advantage was, indeed, one of the chief reasons for the introduction of clearing agreements. With regard to the last claim, that a more conciliatory spirit is introduced into the commercial relations of governments, there is a considerable element of truth. Trade under clearing arrangements is preferable to no trade at all, or to a more restricted trade; so far as the commerce of each pair of clearing countries is facilitated, doubtless a better spirit will rule. It is still necessary to bear in mind, however, the adverse impact of the clearing system upon third countries; certainly relations with these countries are in no way improved.

On the basis of the available evidence, it seems safe to conclude that the clearing system has provided an emergency method of meeting the acute situation established by the multifarious trade restrictions and exchange controls. As such an emergency remedy, it has permitted the continuance and perhaps under specially favorable conditions the growth of trade between certain selected countries, and has made possible the collection by creditor nations of otherwise unrecoverable claims. The very nature of clearing arrangements, however, is such as to strangle triangular trade and to produce a steady trend toward bilateralism, while in practice they have operated to reduce the volume of trade between clearing and non-clearing countries.¹

¹ As a means of counteracting the tendency to decrease triangular trade, triangular clearing agreements, whereby clearing balances may be transferred to third countries, have been suggested. Such arrangements have even been tried out on a few occasions. With respect to the possibility of triangular clearing, the present writer concurs with the judgment expressed elsewhere: "All such special arrangements, however, not only demand a particular combination of circumstances, but require prolonged and difficult negotiations. The tendency for Governments to regulate trade and, in regulating it, to negotiate particular bargains with other Governments, is at best a cumbrous and

Certainly, in view of all the relevant considerations, it would be premature to agree with Dr. Einzig that "Taking a long view, there can be no doubt that Exchange Clearing is the system of the future."¹ It would seem saner to conclude that clearing agreements are at once a symptom and a result of serious world economic derangements rather than a satisfactory permanent solution for those difficulties. This, indeed, is the view of those most intimately concerned, the nations which have entered into clearing arrangements. "In their replies (to a questionnaire sent out by the League of Nations Joint Committee on Clearing Agreements), most of the Governments have stated that they consider this system to be a necessary evil and that they ask nothing better than to revert as soon as possible to the normal methods of international trade."² Some of the reasons for this stand have already been elaborated. They are vividly summarised by another writer as follows:

Bilateral balancing of trade strikes at many important economic advantages arising from international specialisation and cooperation. For the flexible and effective organisation of world-wide trade by private enterprise, it substitutes a much more rigid and narrower series of bilateral national bargains. Efficiency is lowered as the scope for specialisation is limited.

Finally, and more than is commonly recognised, the economic welfare and stability of the modern world has, until recently, been dependent upon the trading mechanism by which the whole body of international economic and financial relations was linked in one continuous chain of trading transactions. Not only were commodities exchanged, but national price-levels were adjusted, and production and investment regulated, by a worldwide trading system with manifold ramifications and interconnections. The breaking of essential links in the chains of transactions has been a major cause of the unprecedented fluctuations of prices, the disorganisation of production, default on financial obligations, and piling up of stocks that have been characteristic of the recent years

unsatisfactory substitute for the restless ingenuity by which, in former times, the private trader, unhampered by minute regulations and controls, sought out profitable opportunities for the exchange of commodities in world markets." *World Economic Survey, 1933-34*, p. 208.

¹ *Op. cit.*, p. 195.

² *Enquiry into Clearing Agreements*, p. 17.

of depression. Attempts to form new trading connections and to dispose of stocks of surplus production in new areas have led, and are still leading to fresh disturbances of international economic relations. The whole world was organised as a series of closely connected and interdependent markets, the smoothness of whose adjustment led perhaps to an underestimate of their value. The substitution of more rigidly planned and directed systems of independent and closely regulated, if not closed, markets has not eliminated but exaggerated the fluctuations of prices and production, and at the same time has destroyed a large part of the specialised international cooperation by which the rapid advance of living standards has in the past been made possible.¹

We may add to this statement the testimony of the man who, in his capacity as President of the Reichsbank and Economic Adviser to the German Government, has probably more direct knowledge of the operation of clearing agreements than any person living.

Dr. Schacht has, against his wishes, found himself obliged to "substitute the normal play of exchange and credit with a terrible bureaucracy," adding — in an interview — that "it is barbaric to be forced to barter machines for cereals or radio apparatus for tobacco, like a negro, who exchanges his ivory for glassware or his rubber for cotton goods."²

Since exchange control and trade restrictions are responsible for the present state of affairs, which contrasts so unfavorably with the preceding condition of relatively free trading relationships, it is these obstacles that must be directly attacked. The Trade Agreements program is a step in the right direction which has been productive of substantial if not spectacular results. Devaluation of currencies to a level which equilibrates domestic and foreign prices can perhaps do more than any other measure to remove fear of excessive imports and the pressure, especially in debtor countries, on the balance of payments.³ Devaluation by the gold bloc, as we have already

¹ J. B. Condliffe, in the *World Economic Survey, 1935-36*, pp. 183-184 (League of Nations Publications, II. Economic and Financial, 1936. II. A. 15).

² Professor Ohlin's report in *International Economic Reconstruction*, p. 94.

³ Such action must, however, be coupled with effective safeguards against inflation, else new price disequilibria will arise, leading to the reimposition of restrictions. This subject will be more fully developed in a later chapter.

noted, has relieved tension in those countries and permitted some relaxation of trade barriers. Another example worthy of citation is that of Austria,

which by a gradual process of removing restrictions was able during 1934 and the early part of 1935 to achieve devaluation, repay short-term blocked accounts, and take long strides toward the abandonment of her exchange control, leaving the exchanges free at the new devalued rates.¹

By a gradual and sustained attempt to eliminate currency overvaluation, to reduce tariffs bit by bit, and to liberalise and where possible to abolish import quotas, the restoration of a large measure of the freedom to trade that existed before the depression may be accomplished.

The most oppressive obstacle to such a program is the unreasoning devotion to the ideal of national self-sufficiency to be found in many countries today, especially in the European dictatorships. Reinforcing this is the chronic fear of war, which tends to make of economic nationalism a contagious disease. The fundamental requirement of a lasting solution of pressing international economic problems is thus to be found in the destruction of the war bogey. Whether that is to be accomplished by a slow rebuilding of the machinery of collective security, by a powerful union of the more peaceably disposed nations, or by the economic collapse of the militaristic countries, or whether it can be accomplished at all under existing political and economic institutions, is a problem the consideration of which is beyond the scope of this book. It may be confidently said, however, that unless and until reasonable security against war is established, only a limited and partial success can attend efforts to restore an effective international system. On the other hand, if by some means peace is assured, the chief incentive toward national self-sufficiency will be removed, and with it the leading obstacle to the reconstruction of a more workable and efficient international economic order.

¹ *World Economic Survey, 1934-35*, p. 186 (League of Nations Publications, II. Economic and Financial, 1935. II. A. 14).

SUGGESTED REFERENCES

Einzig, Paul, *Exchange Control*, Chapters XIII, XIV, and XVIII.

Einzig, Paul, *The Exchange Clearing System* (Macmillan & Co., London, 1935).

Hilgerdt, Folke, "The Approach to Bilateralism — a Change in the Structure of World Trade," *Index*, Vol. X, No. 8 (August, 1935).

World Economic Survey, 1934-35, especially Chapter VI.

World Economic Survey, 1935-36, especially Chapters VI, VII.

World Economic Survey, 1936-37.

International Economic Reconstruction (Professor Ohlin's report). (Carnegie Endowment: International Chamber of Commerce, Paris, 1936.)

Enquiry into Clearing Agreements. (League of Nations Publications, II. Economic and Financial, 1935. II. B. 6.)

CHAPTER X

MONOPOLY AND INTERNATIONAL TRADE

INTRODUCTION

THE analysis of international trade presented in earlier chapters has proceeded principally upon the assumption of perfect competition. Yet the general theory of value, as presented in text-books, uniformly takes some account of monopoly, while in recent years, increasing attention has been accorded the problem of imperfect competition. These extensions of the theory of value merely represent a recognition of the facts of industrial life. Although a large proportion of the production and trade of any country is still conducted under conditions approaching those of perfect competition, the increased use of capital and the spread of mass-production methods have led to the growth of large producing units, eventuating in many countries in the consolidation of production in the hands of a relatively small number of producers, if not in complete monopoly. This trend has been most conspicuous in the production of raw materials and basic manufactures, less so in the more refined manufactures where differences in the quality of product are greater. Differentiation of the product, however, whether actual or merely exaggerated in the minds of buyers by means of high-pressure advertising and salesmanship, has tended to produce increasingly imperfect competition even if it has made it more difficult to attain a complete monopoly.

Although a larger proportion of international than of national trade is subject to the vigorous competition of rival buyers and sellers, if only because the sources of the demand and supply of internationally-traded commodities are generally more numerous than those of goods whose markets are

principally national in scope, nonetheless the influence of monopoly and of restrictions on competition have also become increasingly important in the international field. Our study of international trade requires that some attention be paid to these phenomena, in particular with respect to their influence upon prices and their relation to tariff policy.

The existence of national monopolies or quasi-monopolies has influenced international trade in two ways. As production and trade in any article, within the bounds of single nations, has come under the control of a single producer or a small group of producers, competition in the free markets of the world has frequently become intensified. Moreover, strong national groups have on numerous occasions been tempted to invade one another's territory. The resultant instability of prices and profits has had the natural outcome of stimulating the creation of international combinations with a view to the maintenance of prices in domestic markets and the sharing of neutral markets. Furthermore, even in the absence of an international combination, the existence of a strong national monopoly may permit the appearance of dumping, a trade phenomenon of considerable theoretical and practical importance. Before considering either of these topics, however, a brief résumé of the relevant aspects of price theory is in order.

IMPERFECT COMPETITION AND MONOPOLY

It is important, for purposes of price theory, to distinguish between two broad but distinct groups of commodities: those of which all units are perfectly standardized (like the different grades of wheat and cotton), each unit of any grade being perfectly interchangeable with any other unit, and those of which the output of individual producers are capable of being differentiated from one another (like highly fabricated articles). Differentiation of the product of any individual producer may rest on the basis of technical qualities, design, packaging, service, or any characteristic which serves to distinguish it from units of the same commodity produced by

competing firms. This product differentiation has the effect of splitting up what might otherwise be a freely competitive market into closely related yet distinct segments, between which competition is very imperfect. The consequences of this market imperfection are highly important for price theory, and will be briefly examined at this point.¹

(a) *Perfect Competition.* — In order to understand the price situation which exists under imperfect competition, it is necessary to contrast the position of the individual producer whose product may successfully be differentiated from those of his competitors with that of the producer of a standardized article in a perfectly competitive market. The generally accepted theory of price tells us that in the latter type of market, a price will be established which equalises supply and demand at a figure equal to the minimum average unit cost of the marginal producer.

This outcome may be illustrated diagrammatically as follows: The total demand for a given commodity is represented, in Figure VI(a), by DD', the cost curve for the entire industry (assuming constant costs) by CC'. Price will settle at AP, with output of OA. Corresponding to this diagram for the entire industry, we may construct another, VI(b), which represents the situation confronting the individual producer. (The vertical scale will be the same; the horizontal scale will be much smaller, $\frac{1}{1,000}$ of that in Figure VI(a) if there are 1,000 sellers.) The curve of average unit costs, including a competitive profit, for the marginal producer (*i.e.*, the representative or bulk-line firm) is represented by cc', that of a sub-marginal producer by c_1c_1' .

We assume a perfectly competitive market, which means that (1) buyers choose between sellers only on the basis of price,

¹ Considerations of space severely limit the scope of our discussion, which is confined to the broadest conclusions. For a more extended yet clear analysis, the reader should consult E. Chamberlin, *The Theory of Monopolistic Competition*, especially Chapter V. An excellent discussion of price determination under both perfect and imperfect competition is also to be found in Albert L. Myer's *Elements of Modern Economics* (New York, Prentice-Hall, 1937) and in *Introduction to Economic Analysis*, by A. M. McIsaac & J. G. Smith.

i.e., there is no product differentiation; (2) the number of sellers is sufficiently great so that changes in the output of any one will be negligible with respect to the market as a whole. Under these conditions, the demand for any single producer's output may be indicated by a horizontal line (infinite elasticity) drawn at the height of the prevailing market price. This means that any reduction in his price below that ruling

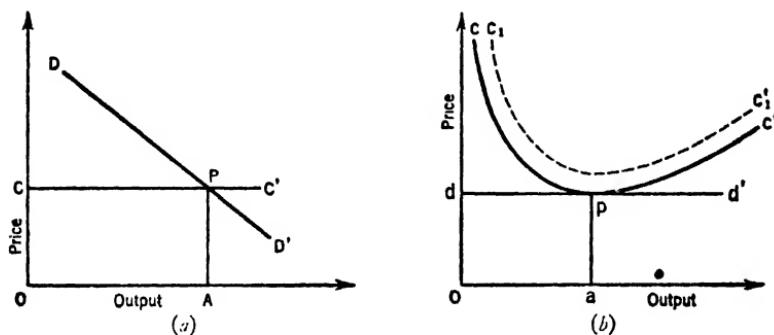


FIGURE VI

in the market will lead buyers to desert his competitors and buy from him, while any advance in his price will lose him all his customers. It is obvious that the marginal producer will maximise his profits by establishing that rate of output (oa) for which his average unit cost is a minimum (ap). For any smaller or larger output, average unit cost is higher than the prevailing price, and losses would be entailed. Sub-marginal producers must (in the long run) be eliminated from the field, since for them, even minimum unit cost is above the market price. Superior producers would expand output somewhat beyond their point of minimum average unit cost.¹

We may conclude this portion of the discussion by noting that no other price than AP (Fig. (a)) can prevail. Were it higher than this, each producer in an effort to maximise his

¹ They would produce up to the point where marginal unit cost was equal to the prevailing price. This would be somewhat higher than average unit cost for that volume of output, since the curve of marginal costs intersects the average cost curve at its lowest point, lying above it to the right and below it to the left of that point. Thus, for the marginal producer, average unit cost and marginal unit cost are, in conditions of equilibrium, identical.

profit would expand output, while new firms would also enter the field. Although the contribution of each single firm's addition to output would be negligible, that of all taken together would be considerable, forcing down the market price until stable equilibrium was established, with price equal to the minimum average unit cost of the marginal producer. For opposite reasons, no price lower than AP could long prevail.

(b) *Monopoly.* — Consider now the principles underlying the determination of price when the market, instead of being subject to unlimited competition, is completely dominated by a single seller. The motive guiding his actions will be the same as that which leads the marginal producer in a competitive industry to establish that volume of output for which average unit cost is a minimum: namely, the desire to maximise profits. Since the surrounding conditions are very different, however, the outcome will likewise be different.

Inasmuch as the monopolist controls the entire output of an industry, he can assume a demand of something less than infinite elasticity. The degree of elasticity in the demand for his product will largely depend upon the nature of the article he sells (necessity, luxury, etc.) and upon the number of commodities which are reasonably satisfactory substitutes for it. Given these conditions, the demand may be taken for granted. The monopolist will then maximise his profits by establishing that rate of output for which total receipts (price times quantity sold) less total costs is a maximum. The price corresponding to this rate of output is the monopoly price.¹

The monopoly price and maximum profit are established when output is such that any increase thereof would add more to costs than it would add to receipts, or any decrease would subtract more from receipts than it would subtract from costs. In technical language, this point is reached when marginal

¹ The monopolist may fix the price and accept the volume of sales consumers will take at this price, or he may establish any rate of output he desires and accept the price at which he can dispose of this output. He cannot, of course, fix both the price and the output independently.

costs equal marginal revenue. This conclusion may be illustrated diagrammatically, but first the concept of marginal revenue must be clarified.

In the following illustrative table are listed the sales in units, the price at which each volume of sales is assumed to be possible (average revenue), the total revenue (price times sales), and the marginal revenue. The latter is derived from the total revenue column; it represents the addition to total revenue made by each unit increase in sales. Marginal revenue falls faster than average revenue or price since from the amount added to revenue by additional sales there must be subtracted the reduction in the sum received for all the earlier

<i>Sales</i>	<i>Price (Average Revenue)</i>	<i>Total Revenue</i>	<i>Marginal Revenue</i>
10	\$1.00	\$10.00	—
11	.95	10.45	.45
12	.90	10.80	.35
13	.85	11.05	.25
14	.80	11.20	.15
15	.75	11.25	.05
16	.70	11.20	— .05
17	.65	11.05	— .15

units. Thus the 15th unit sold adds 75¢ to total receipts; but since the 14 units which could have been sold at 80¢ (yielding a total of \$11.20) must now sell, together with the 15th unit, at 75¢, these units will yield only \$10.50, or 70¢ less than they would bring in were but 14 units put on the market. The net increase in revenue (the marginal revenue) from the sale of 15 units is thus 5¢. For 16 units the marginal revenue is negative, owing to the fact that while the 16th unit adds 70¢ to total revenue, only \$10.50 instead of \$11.25 is obtained from the other 15 units.

We may now illustrate the determination of monopoly price diagrammatically. In Figure VII the demand for the monopolist's product is represented by DD' , while DR is the marginal revenue curve derived from this particular curve.

Marginal costs are represented by mc , which declines steadily to the point of diminishing marginal returns, then rises thereafter. Clearly monopoly price will be MP , since this is the price corresponding to the output (OM) at which marginal cost equals marginal revenue (MT). Total revenue is indicated by either of two areas:

that formed by price times quantity sold ($OMPS$), or that lying under the marginal revenue curve ($OMTD$). For any smaller output than OM (or higher price than OP), an increase in output would add more to receipts than it would add to costs, since to the left of OM the marginal revenue curve is

always above the marginal cost curve. For any greater output than OM (or lower price than OP), a decrease in output would increase profits, since to the right of OM the marginal revenue curve is below the marginal cost curve.

(c) *Imperfect Competition: Differentiation of Product.* — Imperfect competition differs from monopoly in that there are several sellers rather than just one. The action of each may influence and be influenced by the actions of others in the same industry. Therefore there is not only the problem of equilibrium for the individual seller, but also the problem of equilibrium for the group.

Imperfect competition resembles monopoly rather than perfect competition, on the other hand, in that the demand for the output of each producer is less than infinitely elastic. The reason why the demand for the output of an individual producer may be to some degree inelastic is to be found in the fact of product differentiation.

The distinction between standardised and differentiated products has already been drawn, and attention directed to the way in which successful differentiation of the products of individual competitors (Camels, Lucky Strikes, etc.) in a

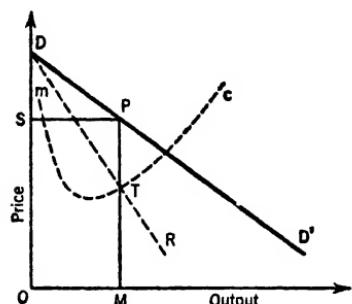


FIGURE VII

given industry (cigarette manufacture) splits up the market into distinct yet related segments. This product differentiation means that because each competitor's product is in some way distinguished from that of other producers, any single firm will not lose all its trade if its price is slightly higher than that of its competitors, nor will it gain customers without limit if its price is slightly lower. In other words, the demand curve for the output of an individual producer, instead of being a horizontal line (of infinite elasticity) is sloping (has an elasticity somewhere between zero and infinity). The less successful is any producer in differentiating his product (the more readily can the output of competitors be substituted for his), the more elastic will his individual demand curve be, and vice versa.

Consider now the situation confronting an individual producer in such an imperfectly competitive industry. He will be in a position very similar to that of a true monopolist.

Indeed, his status will differ from that of a monopolist only in degree. Because direct substitutes of competing producers are available, the demand for his output will be considerably more elastic than were he alone in the field. His guiding consideration, the maximisation of profit, will be the same as that of the monopolist, and like him, he will attempt to establish that volume of output at which marginal cost and marginal revenue are equal. In the diagram (Figure VIII), this will be at output OA, with a price of AP. Since average cost (shown by the curve ac_1) for this volume of output is AG, the producer will make monopoly profits equal to FGPB.

If this condition, so far assumed to apply to a single producer, is typical of all producers, and if entry into the field is unrestricted, new firms will undertake production (also differ-

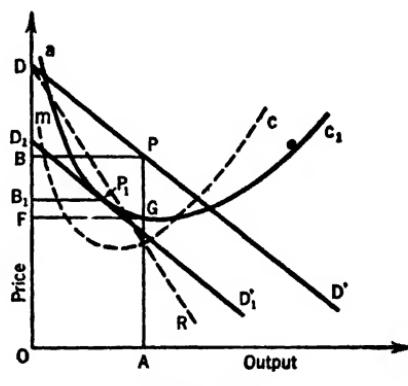


FIGURE VIII

entiating their products in some way). Each of the old firms will lose some of its customers to the new units, and the demand curve for our typical producer's output will shift to the left. Equilibrium will be established when the new individual demand curves are tangent to the individual cost curves. When this result has been attained, monopoly profits will no longer exist, since the unit cost and the selling price of each producer will be equal. The ruling price (if the cost and demand curves for each producer be assumed to be of identical shape) will inevitably be higher than it would be under perfect competition, although profits are no higher, and the volume of output of each producer and of the industry as a whole will be smaller.¹

Up to this point, we have proceeded on the assumption that the number of sellers was sufficiently large to permit us to ignore changes in the output or price policy of any single one. That is, the only change introduced has been that with respect to product differentiation. Suppose we now assume that there are only a few producers (say a half dozen) in the industry in question, and that new producers are restrained from entering the field because of the necessity for a very large initial investment in fixed equipment. Just as an increase in the number of producers led to a downward shift in the demand curve for the individual producer's output, so a reduction in the number of competitors will raise it. So long as differentiation of the products of the separate producers is successfully maintained, their smaller number will now permit them to charge a higher price.²

If we may assume the demand for the product of any one producer to be represented by the original demand curve (DD') in Figure VIII, each producer will maintain an output

¹ There would be no essential difference in the argument if it were assumed that both cost and demand curves varied in shape from producer to producer. The only difference would be that equilibrium would be consistent not with a uniform price, but with a definite constellation of different prices.

² As the number of producers becomes smaller, the individual demand curves tend to become more inelastic, since the elimination of producers at the same time reduces the number of closely related substitute products.

corresponding to OA, selling at a price corresponding to AP. Profits will thereby be maximised for each producer. Depending upon the degree to which entry of new producers into the field is restricted, this price situation will be stable.

(d) *Oligopoly (Small Number of Sellers)*. — The preceding paragraph introduced into a market already imperfect because of differentiation of the product a second cause of imperfection: namely, a limitation in the number of sellers. Let us now consider briefly the effect upon price determination of this element alone, the product being assumed to be perfectly standardised. Suppose the number of sellers to be so small that changes in the output of any one have a significant effect upon price, and suppose further that each seller is aware not only of the direct effects of his policy, but also of its indirect effects, *i.e.*, the certainty that a price cut on his part will meet with retaliation on the part of his competitors. Even though the sellers are independent with respect to their actions, their fortunes are not independent. Realisation of this fact will lead to the establishment of a total rate of output equal to that which would be maintained were the industry in the hands of a monopolist. The monopoly price will rule, with profits for the sellers taken collectively at a maximum, each one sharing in these profits in proportion to his output. No incentive to price cutting will exist, since any departure by a single seller from the monopoly price will "bring disaster upon *himself* as well as upon his rival."¹

If, in spite of the realisation by any single seller that his policy will affect that of his competitors, there is uncertainty as to their intelligence, as to the extent to which a price cut on his part will reduce the volume of his competitors' sales, or as to the length of time which will elapse between his action and theirs, the individual seller will be undecided as to whether to lower his price or to maintain it, and the situation will be indeterminate.²

¹ Chamberlin, *op. cit.*, p. 47. For a more elaborate proof of this conclusion, as well as a discussion of price determination under oligopoly when mutual dependence is *not* recognised, see Chapter III of Chamberlin's book.

² Chamberlin, *op. cit.*, pp. 51-53.

Under such conditions of realised but uncertain interdependence, variations in output and price are likely to be frequent, causing a high degree of instability in the industry.

INTERNATIONAL COMBINATIONS

(a) *General Considerations.* — Having gained some understanding of the principles underlying the determination of prices where imperfect competition, oligopoly, or monopoly rule, we may now consider the place occupied and the effects exerted by industrial combinations of various sorts in the international field.

It is noteworthy that international trade differs significantly from domestic trade in that it is composed to a much greater extent of staple articles capable of accurate description and therefore of separation into standardised grades. Many of these commodities (notably wheat, cotton, wool, coffee, sugar) are produced over a wide area by comparatively small-scale producers. Both the standardisation of these products and the large numbers of individual producers are conducive to conditions of intense competition. Where staple undifferentiated commodities are produced on a large scale, with relatively few producers, so that the policy of any single firm has a significant effect on the market, the conditions are those typical of oligopoly. Depending upon the extent to which each producer takes account of the probable effects of his action on the attitude of his competitors, as well as the certainty attaching to his conclusions, the price ruling in any such industry, even in the absence of outright combination or tacit agreement, will tend toward the monopoly limit. Where great uncertainty exists as to the effects and surrounding conditions of production and price policy, however, the price is apt to be unstable and competition extremely disruptive — simply because of the small number of large-scale producers. Under such circumstances, the natural tendency of profit-seeking organisations is to get together and form a monopoly, or partial monopoly, probably first on a national, later on an

international scale. In those lines of production, on the other hand, where differentiation of the product is the rule (chiefly in the field of highly-fabricated articles), both the national and the international markets are subject neither to free competition nor to monopoly, but to highly imperfect or monopolistic competition. As examples, we may cite automobiles, typewriters, agricultural machinery, radios, etc., industries which are not dominated by monopoly but which also do not compete effectively on a price basis. Markets are divided between rival brands, each with its circle of more or less loyal customers gained and kept by means of real or imaginary differences in the individual product and by extensive selling and advertising efforts.

Our general conclusions with respect to the scope and limits of international monopoly are likewise confirmed by the facts.

With relatively few exceptions (e.g., electrical products) international combines deal, or have dealt, so far, chiefly with raw materials and basic manufactures, such as nitrate, potash, raw steel, steel tubes, and rails; that is to say, with those branches of industry whose products are supplied in bulk or in a few recognised grades.¹

It should be added that those commodities are not only standardised but also, as contrasted with such articles as wheat or cotton, produced on a large scale, usually by a small number of individual firms. Monopolistic combinations of producers of standardised articles whose product is nonetheless widely scattered among small-scale "plants" are chiefly, if not entirely, to be found, as in the case of coffee and crude rubber, where active government intervention has been practised. Of this, more later.

(b) *Forms of International Combination.* — The particular forms of organization adopted by international combinations differ in no way from those utilised within a single country. "Gentlemen's agreements," cartels of widely varying looseness

¹ Plummer, Alfred, *International Combines in Modern Industry* (Sir Isaac Pitman & Sons, Ltd., London, 1934), p. 10. I am indebted to Mr. Plummer's book for most of the information provided in the following sections.

or strength, holding companies, and outright mergers are all to be found in one industry or another. It appears, however, that cartels are rather more widely used in the formation of international than of purely national combinations, especially in the United States. Hence a few words of description may not be amiss.

A cartel is an association of independent undertakings, usually created for the purpose of influencing the conditions of sale in the interests of its constituent members. Ordinarily, production quotas are established for each producer, with a penalty for any output in excess of the quota and a premium for any deficiency. The stronger cartels generally establish a common sales office, but even such organizations leave matters of finance, production, and labor policy, etc., to be determined by the individual members.

Some of the more outstanding examples of international cartels may be cited by way of illustration. In the steel industry, cartellisation has a long history. The latest agreement was signed in May, 1933, by the producers of Germany, France, Belgium, Luxemburg, and the Saar, to be in effect for five years. Production for export is subject to quota, but since the domestic markets are (subject to certain special provisions) reserved to the different national members, production for domestic consumption is not subject to the control of the International Steel Cartel.

Practically the entire aluminum-producing industry of the world (with the exception of the monopolistic Aluminum Company of America)¹ has since 1928 been joined in a strong cartel, combining "all the important producers of Germany, Switzerland, France, Great Britain, Italy, Austria, and Canada, as well as certain Norwegian producers."² It not only controls sales through quotas but also fixes standard prices.

¹ Our anti-trust laws make it difficult for American firms to adhere explicitly and openly to international conventions and agreements of a monopolistic nature.

² Plummer, *op. cit.*, p. 69.

For most of the period since 1903, European incandescent lamp manufacturers have, under a series of agreements, been united in a cartel which after 1924 practised delimitation of sales areas and thereby, indirectly, production control. At the latter date, manufacturers in all countries except Canada and the United States were included in the agreement.

Without exhausting the list, international cartels in the potash, cement, dye stuffs, nitrate, steel rail, steel tube, mercury, and tin industries may be mentioned.¹

To stronger and more closely-knit forms of international combination than cartels, the term "concerns" has been widely applied. While a cartel is an alliance or association of undertakings which are independent save for agreed production quotas, and occasionally measures of price control, a concern may be likened to a close federation of the individual units, with unified financial control and varying degrees of centralised authority over production technique, commercial policy, and other matters of common interest. Many devices have been used in the creation of such international concerns, such as an exchange of shares between the constituent firms, the erection of a holding company structure, or outright merger.

In the comparatively new artificial silk (or rayon) industry we have a remarkable example of a world-wide international combination of national units and combines. It is a good deal more than a gigantic international cartel. It is a vast and intricate network of interlacing interests, both financial and industrial, constructed mainly by means of various exchanges of shares, and agreements for interchange and pooling of technical knowledge, and it is moving, in all probability, towards a still closer and more comprehensive form of international combination.²

This concern closely unites the three largest rayon producers in the world, Courtauld's, Ltd. of Great Britain, Vereinigte Glanzstoff Fabriken of Germany, and Snia Viscosa of Italy, as

¹ For a detailed discussion of these cartels, as well as other forms of international combination, the reader should consult Plummer.

² Plummer, *op. cit.*, pp. 28-29.

well as other manufacturers in the Netherlands, France, and other countries. One or another of the members of the combine control the bulk of rayon manufacture in the United States.

The vast Unilever organisation of Great Britain and Holland, producing soap, candles, glycerine, margarine, vegetable oils, dairy products, and many other articles, with its own retail outlets, is a good example of a huge holding company structure. The British and the Dutch interests of the combine are controlled in the first instance by a top holding company in each country, these in turn being dominated by "the interlocking directorates of two private companies, each of which controls 50 per cent of the voting power in Unilever Ltd. and Unilever N. V., so that the British and Dutch interests jointly control both."¹

The European linoleum industry is united through a Swiss holding company, the Continental Linoleum Union. By ownership of shares in German, Swiss, Swedish, Lithuanian, and Norwegian companies, and through agreements with manufacturers in Holland, France, and Great Britain, the combine exerts a strongly monopolistic influence over prices of its products in Europe. Many other illustrations could be cited; it will suffice to mention the huge match concern built up by the notorious Ivar Kreuger (which in 1932 controlled some 150 factories in 28 countries), the International Telephone and Telegraph Company of the United States, and Imperial Chemical Industries of Great Britain, both the latter also having wide international ramifications.

(c) *Circumstances Surrounding the Formation of International Combinations.* — The reasons for the formation of combinations are no different for international than for national organisations of the sort. Chief among these is the desire for higher and more stable profits, to be achieved by the direct raising or maintenance of prices, by the control of production, or by the division of markets. This drive toward combination is intensified if competition has been especially severe, as it fre-

¹ Plummer, *op. cit.*, p. 36.

quently is in mass-production industries whose output consists of standardised, comparatively crude articles. Other incentives to consolidation may be the economies to be derived from concentrating production in the most efficient plants, the exchange of patents and technical information, more economical purchasing, and the reduction of selling expenses, though these are generally of decidedly subordinate importance.

Except where direct governmental intervention is practised, international (or national) combinations rarely come into existence when the producing units are small and numerous. Thus a first requirement for the creation of an international combine is that the industry in question shall be one using mass-production methods, which in turn implies that the number of individual producers is small. Consolidation on an international scale is greatly facilitated, of course, if the firms in different countries are already united in national combinations, because of the greater ease of securing agreement between the constituent units of the combine and the greater certainty that the agreement can and will be enforced. Some authorities, indeed, go so far as to maintain that international combinations require a previous monopolistic organisation of the national market.¹ If the term "monopolistic organisation" be interpreted loosely to mean a combination of national producers comprising a considerable proportion of domestic production, this position would appear to be justified. Of all the international agreements cited, none unites scattered individual firms; each represents rather an extension of previous local consolidation into the international field.

¹ Notably MacGregor, D. H., *International Cartels*, Publications of the League of Nations, II. Economic and Financial, 1927. II. 16. In support of this view, mention may be made of the fact that lack of national organisation in certain European countries, notably Great Britain, has been the chief obstacle to the formation of an international coal cartel. The spread of large-scale organisation and the habit of working together on a national scale help to smooth the road toward combination. The increasing importance, in the U. S., of powerful trade associations, greatly accelerated under NRA, and the concentration of industrial control in the fascist states, have given a strong impetus to the centralisation of industrial policy formation which may have important consequences in the international sphere.

Natural scarcity of a basic raw material, especially when the sources of its supply are concentrated in a small number of regions, also provides a fertile ground for the organisation of an international combine. This feature is prominent in the case of aluminum, tin, mercury, quebracho, boneglue, and petroleum. Finally, the cooperation of governments, or at least a benevolent attitude on their part, greatly increases the ease of establishing a firm international organisation. Governmental aid has been an important factor in creating and maintaining the Franco-German potash cartel, the European steel cartel, and the tin combine. The hostile attitude of the United States government toward monopolistic organisation, as embodied in our anti-trust legislation, has made it difficult for American producers to adhere, at least explicitly, to international agreements, though it has not blocked international financial interlacing through the exchange or purchase of corporate stocks, as in the rayon, electrical, and chemical industries. The Webb-Pomerene Act of 1919, however, permits American firms to combine with foreign organisations for purposes of export. The activity of governments, however, is particularly interesting in connection with a number of international combinations, which could never have existed without official support. A brief mention of these is in order at this point.

Direct government intervention to establish, in the interest of profitable domestic production, a measure of control over the world's markets has been conspicuous in the case of coffee, rubber, sugar, and tin. The Brazilian government, during most of the years since the War, has attempted to maintain the price of coffee by means of compulsory restriction of production and even destruction, at times, of a large proportion of the crop. Despite the fact that Brazil has during this period produced approximately 70% of the world's coffee supplies, the "valorisation" schemes of the Brazilian government cannot be said to have met with conspicuous success. Restriction of Brazilian output was offset by increased production in other countries, illustrating the fact that to exercise

effective influence over the price of a commodity produced in more than one country, outside supplies must be brought under control. It is just the absence of outside supplies that made the Japanese camphor monopoly so successful. In recent years, the production of synthetic camphor has greatly weakened Japan's hold on the market. Again, the government-fostered Chilean nitrate monopoly was extremely effective so long as Chile was the only important source of nitrate supplies. With the phenomenal growth since the War in the production of synthetic nitrogen products, however, the Chilean monopoly has been completely broken. By 1931, Chile's share of world consumption of nitrates amounted to less than 10%. Attempts in recent years to form an international cartel ended in failure.

The Stevenson plan of restriction of the output of crude rubber in the Malay States, introduced in 1922 by the British government, broke down on the rock of outside competition. Reduction of British supplies met with increased production by Dutch East Indian plantations. Only with the inclusion of the latter group and of producers in Siam and French Indo-China in a revised program of international restriction did the plan become effective.

Sugar likewise provides an interesting illustration of government intervention. Faced with unprofitable prices after the War, as a direct result of expanded production to meet war demands, the Cuban government in 1926 introduced measures limiting the output of cane sugar and establishing quotas for sales in different markets. Cooperation of European beet-sugar growers was secured in 1928, but increased production on the part of Java brought the agreement to naught. With the outbreak of the depression, however, the Javanese producers were induced to enter the "Chadbourne Plan," which imposed restriction of output and export quotas.¹ Never covering more than 40% of total world production, the Chadbourne agreement became by 1933, as a result of expanding

¹ Only in Cuba and Hungary did the government take an active part in its enforcement.

output in countries not adhering to its terms, of negligible importance.¹

(d) *International Combinations and Tariffs.* — It might be expected that combinations on an international scale would lead to the emergence of a cosmopolitan viewpoint in the formation of industrial policy. Any taint of cosmopolitanism, however, is confined to the sharing of neutral markets, and even here, cooperation is based on jockeying for advantage by each national group. With respect to national markets, which almost all agreements specifically reserve for exploitation by the component national units, international combinations generally reflect a strongly protectionist outlook.

By thus affording the same relief from foreign competition that is provided by protection, acting indeed as a substitute for protection, it might appear that the formation of international combinations would be a prelude to the lowering of tariff barriers. Yet this outcome has seldom been realised. The reasons are numerous. International agreements are formulated on the basis of existing tariffs, which are thus taken into account in the very nature of the agreement arrived at. High duties make necessary less stringent safeguards with respect to national markets. Moreover, a combination may not eliminate all competition; a lowering of duties might greatly strengthen the position of outsiders. Impermanence of some international combinations — which are often explicitly given a limited term of life — makes the continuance of protection important when the question of a renewal of an agreement comes up. Maintenance of protective duties also provides an anchor to windward in case the combination should collapse. Nor is any industry likely to give up a potentially useful defensive weapon which it is much easier to retain than to regain. Finally, the position of the industries directly concerned is reenforced by the attitude of governments. For them, any reduction of imports consequent upon international agree-

¹ For an excellent discussion within a brief compass of the various restriction schemes, see J. W. F. Rowe, *Markets and Men* (The Macmillan Co., New York, 1936).

ments among producers means a loss of revenue, which would be still further reduced were duties lowered. Moreover, countries with bilateral tariff schedules establish their conventional or minimum duties as the result of a process of bargaining, and are unlikely to be willing to weaken an apparently strong bargaining position by the voluntary reduction of duties. The considerations with respect to policy, as well as the available evidence, lead inescapably to the conclusion that international combinations are not and are unlikely to become supporters of a low-tariff program.

(e) *Effects and Tendencies.* — We may now explore briefly some of the more general effects and tendencies of international combinations, in particular their effect upon prices and upon the volume of trade.

Since the chief goal of international combines is the elimination of competition and the raising of the level of profits, achieved either through limitation of output, division of markets, or direct control over price quotations, there can be no doubt that they exert a strong tendency toward increasing the prices of the commodities they influence. It may be claimed on their behalf, however, that

they reduce the numbers of middlemen and the burden of their charges; that cross-freights and unnecessary payments of import taxes are eliminated; that they abolish dumping; that they make possible many "internal economies" such as follow from the reduction of the numbers of redundant patterns and varieties, and the exchange of technical and commercial information; that sales propaganda costs less and is more effective, since all overlapping and purely competitive advertising is eliminated; that limited supplies of raw materials can be fairly divided so that high costs of raw materials are avoided. International agreements for interchange of patents and research results, if duly honoured in the observance, make for greater productive efficiency, and the rapid improvement of the quality of goods available to consumers. Also it is true that simultaneous, unco-ordinated commencement of new agricultural and mining enterprises, the building of factories and furnaces by many independent producers in different countries, and the consequent glut due to over-rapid expansion of world productive capacity can be avoided where producers act in

concert under international agreements. This plea is especially strong in view of the tendency for productive capacity to expand very rapidly in almost every major industry.¹

It is extremely doubtful, however, whether much weight should be accorded such considerations. Even in the narrower sphere of national combinations, it is the opinion of most authorities that the economies of combination as distinct from the economies of large-scale production are of minor if not of negligible importance. If this judgment be correct, how much more unlikely that yet larger combinations, or combinations of combinations, still more remote from the principal sources of production economies, will result in a significant lowering of the cost curve of an industry. It seems far more probable that the price-raising tendencies of monopolistic organisation will prove dominant. Indeed, experience indicates that with few exceptions (and those mostly the result of depression conditions) the formation of international combinations has led to higher prices.

The price set for its product by an international combine need not be, and probably rarely is, the theoretical pure monopoly price. For in the first place, very few combines have a complete monopoly of the world market, or rather, of all the world's markets. The price charged in any of these will be tempered by the extent of outside competition. Further, even where the control of production is inclusive, the competition of substitutes, the possibility that producers may find it to their interest to break away from the combine, fear of potential new competition or of government intervention, may restrain the monopoly in its price policy. We may safely conclude, however, that to an indeterminable degree the price charged by an international combine will, in all probability, be higher than the level which would be established by competition. The same conclusion likewise holds for commodities

¹ Plummer, *op. cit.*, pp. 141-142. Dr. Plummer concludes, however, that "there may be no guarantee that the consumers and wage-earners will not be worse off after these economies and advantages have been realized by an international combine."

subject to differentiation of product, produced and marketed under conditions of imperfect competition.

With higher prices, total sales and the total volume of international trade will be smaller.¹ It is possible, of course, that producers in a monopolistic or an imperfectly competitive industry may by large expenditure on advertising and selling maintain the demand for their product at such a level that output and sales will be quite as large as if free competition ruled. The addition to demand so engineered, however, will be at the expense of other goods. Unless these are purely domestic commodities, the conclusion, that international trade will be reduced, still holds.

As we have seen in an earlier chapter, price changes may be and generally are an important factor in the mechanism of adjustment to disturbances in the international balance of payments. Since prices set under conditions of monopoly or imperfect competition are, for the same reasons that they tend to be higher than the competitive level, likely to be more resistant to downward pressure, this means that when disequilibrium in the balance of payments exists, adjustment is more difficult. The burden of adjustment through price changes is thrown upon the competitive commodities, while adjustment in the non-competitive fields is effected by shifts in demand schedules and by correspondingly greater changes in the volume of output and employment.²

DUMPING

(a) *Nature of Dumping.* — Dumping is a special aspect of the activity in the international field of a national monopoly. Viner defines it as the "sale for export at prices lower than those charged to domestic buyers."³

¹ Trade will also be reduced indirectly, through the effect of higher prices of raw materials upon the prices of more highly fabricated articles.

² On this and related points, see W. Edwards Beach, "Some Aspects of International Trade under Monopolistic Competition," in *Explorations in Economics*.

³ J. Viner, article on "Dumping" in *Encyclopaedia of the Social Sciences*. A broader definition, also given by Viner, characterises dumping as "price dis-

In applying this definition to concrete cases, it is important that certain vital implications be borne in mind. The domestic and export price compared must be for a commodity which is identical in all respects. This means that both prices must be taken f.o.b. a common shipping point, at the same time, and subject to the same terms and conditions as to the time of payment, deductions for quantity purchases, packaging requirements, etc. Failure to observe these qualifications may mean and in actual cases has frequently meant illicit identification of the practice of dumping,¹ or failure to identify it when it exists.

Clearly, dumping does *not* mean foreign sales in a given market at a price below the costs of some or all of the domestic producers. Such a situation is merely an indication of a condition of keen foreign competition. Again, characterisation of dumping as sales abroad below cost of production, if by cost is meant average unit cost, is inadequate, since in times of depression both foreign and domestic sales are often made at such a price. Nor is so-called "exchange dumping," which covers sales abroad by a country whose exchanges are depreciating more rapidly than internal prices are rising, true dumping, since the f.o.b. price for exports may be the same as for domestic sales.

(b) *Kinds of Dumping; Conditions Necessary for Dumping.* — Dumping may be divided into two principal classes, depending upon the duration of the price discrimination. Sporadic (or intermittent, or short-period) dumping exists when from time to time, over short periods, the producer sells abroad at a price lower than he charges domestic customers. This type of dumping may be undertaken for a number of reasons: to reduce surplus stocks without spoiling the home market, to

discrimination between two markets." This would include dumping in a domestic as well as in a foreign market, "reverse" dumping and dumping between two foreign markets. Since our concern here is principally with the more common type of discrimination between the domestic and a foreign market, we shall use the definition given in the text above.

¹ Interesting illustrations of "spurious dumping" are provided in Plant, A., "The South African Anti-Dumping Tariff," Appendix to Beveridge's *Tariffs: The Case Examined*.

maintain connections in a temporarily depressed foreign market, to introduce a product to foreign buyers, to eliminate competition abroad, or in retaliation against dumping in the home market by a foreign competitor.¹ Systematic (or long-period) dumping, on the other hand, means the maintenance year in and year out of a differential between the domestic and the foreign price. Clearly, systematic dumping could take place under competitive conditions only if the state granted an export bounty, since without it competing producers would (assuming the foreign price to be lower than the domestic) confine their selling efforts to the higher-price home market; no exporting would take place until the foreign price was higher than the domestic by the additional costs of transport. In the absence of a bounty, systematic dumping requires the existence of a monopoly, when the domestic price may be maintained, exports dumped abroad to secure the benefits of more complete utilisation of plant. Dumped exports will not be sold below *marginal* cost, since this would involve selling at a loss.

Monopoly of the home market is one requirement for systematic dumping. In addition, either the round-trip costs of transport must equal the differential between the domestic and the foreign price, or a protective duty sufficient to make up this difference must be available. In the case of bulky articles, costs of transport may be sufficient to provide the necessary shelter against the re-import of dumped exports. For commodities on which shipping charges are but a small proportion of their cost, the establishment of a protective duty is essential if systematic dumping is to take place.

(c) *The Theory of Dumping Price, under Conditions of Systematic Dumping.* — In the case of a national monopoly, the domestic price will be that which maximises profits, *i.e.*, that price at which marginal revenue and marginal cost are equal. If the foreign price is equal to or higher than this monopoly price in

¹ Sporadic dumping might be undertaken by competing producers for any of the first three reasons given. The last two types, however, would seem to imply the presence of a monopoly at home.

the domestic market, dumping will be unnecessary. The monopoly will simply expand output up to the point where marginal cost is equal to the price he can get in the foreign market.¹ If, however, the foreign price is lower than that ruling at home, dumping — by definition — will have to take place if the monopoly wishes to sell abroad. The dumping price will clearly depend upon two sets of circumstances: (a) the nature of the monopolist's marginal costs — whether they are decreasing or increasing over the relevant scales of output; and (b) the volume and elasticity of the foreign demand for the monopolist's output, which in turn will depend upon the strength of foreign consumers' desires for his product and upon the intensity of competition in the foreign market.

Let us assume first that the monopolist's marginal costs decline for a considerable volume of output beyond that sold at the monopoly price on the home market, and that his product is in some ways distinct from those of his competitors abroad. (That is, conditions abroad are those of imperfect competition.) The foreign demand curve for his output will then be sloping rather than horizontal, as in the case of perfect competition. Expansion of output to take advantage of the foreign market will occur, proceeding to the point where marginal cost equals foreign marginal revenue. Now, however, marginal cost (which applies to *all* output) is below the level at which production for the home market ceased (below the domestic marginal revenue curve), so it becomes profitable to expand output for domestic consumption up to a new point where marginal cost again equals marginal revenue. This in turn permits a further increase in output for foreign sale at falling marginal cost, and so on.² This reciprocal influence

¹ The effect of this expansion of output upon the home price will be similar to what happens in the case of dumping, which is analysed in the following passages.

² The analysis presented here attempts to reformulate somewhat more briefly Haberler's treatment of the subject. The diagram on page 449 is a reproduction of the one he uses to illustrate his argument. It applies to the preceding paragraph of the text.

For a fuller discussion, see Haberler, *The Theory of International Trade*, pp. 307-313.

of increased output for one market upon the costs and maximum profit point of the other market continues in constantly diminishing magnitude until a position of equilibrium is reached, at which marginal cost, marginal revenue at home, and marginal revenue abroad are all equal. While in the end the foreign price is lower than the home price, the latter is also (because of diminishing marginal costs) lower than it would be in the absence of dumping.

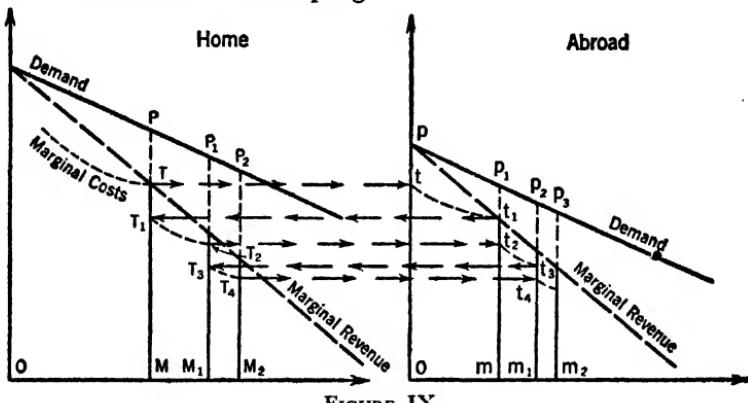


FIGURE IX

Now change our assumptions with respect to costs. With increasing marginal costs, dumping will still be profitable, up to the point where marginal cost and marginal revenue at home and abroad are all equal. But since the additional dumped output raises marginal cost, the identity of domestic marginal revenue and marginal cost, to which the monopoly price corresponds, is at a higher point, and entails a smaller volume of output for the home market. The output no longer sold at home must find a market abroad. Hence the portion of the marginal cost curve applying to the foreign market will be lengthened, with a decline in the marginal cost corresponding to both home and foreign marginal revenue. Equilibrium will be established at a foreign price somewhat lower, a domestic price somewhat higher, than those indicated at the outset.

Suppose now that with decreasing marginal costs, the foreign market had been perfectly competitive. The foreign demand curve for the monopolist's output would then be

perfectly horizontal, with the curve of marginal revenue coinciding with the demand curve. If we could assume the monopolist's curve of marginal cost to decline indefinitely, his attempt to maximise profit on foreign sales by expanding output would then lead to the establishment of such a low level of marginal cost that he would end by driving all competitors out of business. Theoretically, a world monopoly would result, which could be maintained so long as the foreign monopoly price remained below the former competitive price. Long before this situation developed, however, the expansion of the monopolist's output would in all probability lead to the appearance of increasing marginal costs, either because of diseconomies of excessively large-scale production or because of rising prices of the factors of production. It would, therefore, seem that under conditions likely to be met in practice, some expansion of output for foreign consumption might take place, but that equilibrium would be established at some level of marginal costs higher than that ruling when dumping commenced (and therefore with the demand price also somewhat higher than at the outset).

Had we assumed, as in the preceding paragraph, the monopolist producing a commodity in no way distinguishable from that of his foreign competitors, but with the number of competitors very small, the price situation in the foreign market would depend upon the extent to which each competitor took account of the indirect as well as the direct effects of his policy (*i.e.*, of the probable reaction of his competitors) and upon the degree of certainty attaching to his expectations. In the event of full realization of these indirect effects and of certainty as to all relevant conditions, a sharing of the foreign market at the full monopoly price (which might be higher or lower than the home monopoly price) would occur. With a large element of uncertainty, the situation would be most unstable, conducive to the formation of an international combination.

(d) *Effects of Dumping.* — In estimating the advantages and disadvantages of dumping, it is necessary to distinguish be-

tween the sporadic and the systematic varieties. Sporadic dumping, for whatever purposes undertaken, is generally objectionable from the point of view of the importing country. This is because the very intermittent nature of the dumping is productive of instability, causing painful shifts in production or in demand, adjustment to which is purely temporary, being reversed when the dumping ceases.¹

With respect to systematic or continuous dumping, however, the common objection of producers in the importing country carries no more weight than if the imports came in because costs were lower abroad. The effect is the same so long as the dumping continues. Cheapness of imports is the only valid economic reason for trade, whatever its causes.

From the point of view of the exporting nation, the effects of dumping are beneficial or the opposite, depending, in the first instance at least, upon whether the home price is lowered or raised. If the former, consumers are benefited and there is no counterbalancing disadvantage to be considered. If, on the other hand, the domestic price rises, the consumer is injured, and it is very questionable whether the profits of the monopolist will be sufficiently higher to compensate for this loss. A higher domestic price (coupled with a higher marginal cost) may yield smaller monopoly profits on the home sales, depending upon the elasticity of demand and the shape of the marginal cost curve. If profits at home are diminished, this reduction may or may not be offset by the additional profits on the foreign sales, depending upon the degree of competition in the foreign market and thus the extent to which this element of total gain partakes of a monopolistic character. Moreover, even though total profits of the monopolist were increased in an amount equal to the loss in consumers' surplus, the resultant situation might be undesirable from the point of view of public policy, on the grounds of increased inequality in the distribution of income.

¹ A possible exception is dumping to maintain connections in a temporarily depressed market, when the dumping price may be no lower than that charged by competitive producers in the importing country.

Mention has earlier been made of the depressing influence upon exports of finished manufactures exerted by a monopoly price for the raw materials of industry. Where dumping is practised, this effect is intensified by the fact that foreign competitors of the finishing industries can buy their raw materials at the abnormally low dumping price. A case in point is

the German dumping of iron and steel, sold abroad (for example, to Holland and formerly to England) at a price often 50 per cent. below the German price. . . . It is well known that the Dutch ship-building industry lives directly upon the German dumped exports. . . . Another example often quoted is the encouragement of the English jam and other sugar-using industries by the Continental sugar-dumping before the Brussels Sugar Convention of 1902.¹

Equitable treatment of the domestic manufacturing industry would call for a reduction of price by the monopoly on materials to be used in the production of goods for export.

The foregoing discussion of the advantages and disadvantages of dumping has proceeded on the assumption that the monopoly in question was unavoidable. If, however, the monopoly is supported by legislation, or if it could be effectively destroyed by state action, the pursuit of an anti-monopoly policy would result in a more economic allocation of the factors of production. It is the effects of monopoly on the home market that are bad. Dumping, as we have seen, may or may not be injurious, though as Haberler notes,

the current Protectionist outlook means that dumping leads, on the one hand, to equalising duties for the finishing industries and, on the other hand, to retaliatory measures by the other countries, not to mention the frequency with which dumping is (wrongly) used as a reason for Protectionist interventions.²

(e) *Anti-Dumping Duties.* — The natural resentment of producers in a dumping market against the competition of low-price, dumped commodities has led to a widespread demand for protective legislation. Beginning with Canada in 1904, anti-dumping measures have since been adopted by the

¹ Haberler. *op. cit.*, p. 315.

² *Ibid.*, p. 316.

Union of South Africa, the United States, Great Britain, Australia, New Zealand, Newfoundland, Japan, Germany, and Roumania. Most of this remedial legislation authorises administrative increases in tariff duties whenever a domestic industry is threatened by "abnormal or unreasonable competition." Viner feels that the consistent application of these measures in Canada, South Africa, Australia, and the United States has been successful in checking serious and systematic dumping.¹ It is to be noted, however, that this is just the type of dumping that is not injurious. Sporadic dumping, on the other hand, which is harmful, is more difficult to halt. Beveridge calls attention to a number of serious difficulties in the administration of anti-dumping duties in the face of short-lived price-discrimination. (1) The time element interposes an obstacle hard to overcome. If notice must be given of duty increases, the goods are almost certain to be shipped in advance of their application. On the other hand, if no notice is given, importing is rendered uncertain, for "it is by no means easy for an importer to know beforehand whether any particular transaction will be treated as dumping."² (2) It is far from easy to determine whether dumping is actually taking place. What domestic price, of those quoted by a number of competing producers, is to be taken as the basis of comparison? Further, how make certain that all the relevant circumstances are identical with respect to both home and foreign sales? In addition to these difficulties of administration, there is a tendency for the general interest in low prices to be sacrificed to the special interest of a small number of producers in the elimination of keen competition, as well as for supposedly temporary anti-dumping duties to become permanent.

As for ordinary permanent protective duties as a remedy for sporadic dumping, it should be clear that these are useless unless they are prohibitive. For dumping over a tariff wall that permits *some* imports at all times is no more difficult than

¹ *Encyclopaedia of the Social Sciences*, Vol. 5, p. 277.

² Beveridge, *Tariffs: The Case Examined*, p. 129.

dumping into a free-trade country, since the price in the protected market is higher to begin with by the amount of the duty.

It would seem that any form of protection is an unsatisfactory weapon with which to combat sporadic dumping. Perhaps a better device would be that suggested by Beveridge — an international convention with two main provisions: (1) "the inclusion in the tariff of each country of a clause allowing re-importation duty free of goods originally made in that country," and (2) "a recognition of the right of each State absolutely to prohibit imports, when their price had been artificially cheapened by subsidies from another State, subject to appeal to some international tribunal."¹

SUGGESTED REFERENCES

Haberler, Gottfried von, *The Theory of International Trade*, Chapter XVIII.

Plummer, Alfred, *International Combines in Modern Industry* (London, 1934).

MacGregor, D. H., *International Cartels*, Publications of the League of Nations, II. Economic and Financial, 1927. II. 16.

de Rousiers, Paul, *Cartels and Trusts and Their Development* (same, II. 21).

Viner, Jacob, article on "Dumping," *Encyclopaedia of the Social Sciences*. Also, *Dumping: A Problem in International Trade* (Chicago, 1923), and *Memorandum on Dumping*, League of Nations, II. Economic and Financial, 1926. II. 63.

Beveridge, *Tariffs: The Case Examined*, Chapter XI ("Dumping"), and Appendix A.

Rowe, J. W. F., *Markets and Men* (The Macmillan Co., New York, 1936).

Beach, W. Edwards, "Some Aspects of International Trade under Monopolistic Competition" (*Explorations in Economics*, Part I, Chapter X).

¹ Beveridge, *Tariffs: The Case Examined*, pp. 133-134.

CHAPTER XI

INTERNATIONAL MONETARY PROBLEMS

INTRODUCTION

IT is no exaggeration to say that of all the economic problems with which the governments of the world have been confronted during most of the period since the War, none has been more pressing than the monetary problem. For several years immediately thereafter, the currencies of many nations were in a chaotic condition, while even in countries which suffered less severely from this trouble monetary expansion had gone so far as to bring about serious instability. Even after 1926, when a considerable amount of reorganisation had restored some degree of order, questions of a monetary nature remained in the forefront of discussion and continued as an important factor influencing the decisions of governmental authorities. But with the rapid spread of world-wide depression after 1929, credit crisis succeeded credit crisis, and the air was filled with the sound of crashing gold standards. Contraction of the supply of money bred unemployment and industrial stagnation, which in turn reenforced the spiral of deflation. International trade and investment in particular were more severely depressed than domestic activity. Moreover, a preponderance of the remedies suggested and a large proportion of those tried either were of a distinctly monetary character or involved positive action by the banking authorities. As a result, the whole world has become money conscious to a degree probably never attained before.

Because of the importance of recent and current monetary problems, no broad analysis of any large segment of economic life would be complete without considering in some detail the impact of monetary changes. This statement applies with

especial force to a study of international economic relations, for such a study attempts to investigate all fields of economic activity in their international aspects. Therefore, this chapter will be devoted to an analysis of those phases of monetary policy and problems which have an international bearing.

To clarify the scope of this discussion, it may be well to distinguish at least in a general way between the primarily domestic and the primarily international aspects of monetary problems. There is, of course, no sharp dividing line between them. Nonetheless, the emphasis and interests of a student of monetary theory and policy proper will be different from those of a student primarily concerned with the relations between different national economies.

From the domestic point of view, the chief problems requiring analysis are the monetary causes of instability and the appropriate measures of control with which to reduce it. While this is not the place to enlarge upon these topics, it may be remarked that most countries are now determined to use every weapon at their command to lessen the violence of industrial fluctuations, and that among the measures available for this purpose, monetary policy is regarded as one of the most important. We may add that in recent discussions, two types of policy have been given special prominence: that of neutral money and that of price stabilisation. The first would limit the effective volume of money in such a way as to stabilise per capita money incomes, while the second would attempt to stabilise some critical part of the price structure. The advocates of both policies aim at bringing about and maintaining a condition of equilibrium, so far as this may be achieved by monetary measures. The less doctrinaire among the various antagonists are not so far apart as might seem, being willing to supplement the pursuit of their major criteria by attention to other indicators of disequilibrium.

With this exceedingly sketchy survey of the problems confronting the monetary theorist, we may now proceed to indicate those aspects of the field with which, as students of international economics, we shall be principally concerned.

So far as nations engage in economic transactions with one another, buying and selling, rendering and receiving services, lending and borrowing, their economies are related and interdependent. Except where political considerations dominate, this interdependence is chiefly one of price. Through changes in international demands, in conditions of supply and cost of product, through movements of factors, the price system of each country is linked to those of the rest of the world. This interrelationship of national price systems is brought to a focus in the foreign exchanges, which establish the necessary connection between the currencies of different countries. It is in the foreign exchange markets that the first impact of changed economic relationships is felt. Reactions to such variations are transmitted first through the foreign exchanges to the banking systems of the different countries, later to their commercial and industrial structures. These reactions are discussed in Part I (see especially Chapters IX to XI), and will be further elaborated in the course of this chapter.

As we have seen, there are two chief types of adjustment to economic change (*e.g.*, in lending, in international demands, in cost-price relationships), depending on whether exchange rates between the countries concerned are fixed or free to fluctuate. Both types of adjustment serve to bring about, in different ways, changes in relative prices, to the end that equilibrium in the balance of payments is restored. The gold standard is the prototype of the fixed exchange system, independent paper currencies of the free exchange system. Just as the nature of the adjustment in the two cases differs, so also do the effects produced upon monetary systems.

The primary concern of this chapter will be to analyse the international adjustment mechanism from the point of view of the desirability of general adherence to a common international gold standard or of adopting — as has a large segment of the world already — separate managed paper currencies. That is, the principal question with which we shall be concerned is: Should the international gold standard be reestablished? The desirability of a common inter-

of exchange on L toward the gold import point. As this rate is approached, the risk of exchange fluctuations becomes virtually nil, and banks in B (or its Central Bank) are likely to increase their balances in L, particularly if the discount rate rises there. If now credit is permitted to expand in B, on the basis of additional foreign-exchange reserves, incomes will expand, expenditure on imports and exports will increase, and the balance of trade will tend to change in such a way that the loan can be transmitted in the form of goods. The increased purchasing power made available by the loan and by the expansion of credit, being principally directed to the purchase of domestic commodities, will tend to drive up their prices and those of the factors used in their production. There will also be a tendency for export prices to rise, so far as prices of factors common to both domestic and export industries increase. To the extent that export prices do rise, the value of exports will — in the face of elastic demands — be directly diminished, a change in harmony with the requirements of adjustment.

In the lending country, the initial diminution of purchasing power resulting from the transfer of the loan (taking the form of a transfer of balances to foreign ownership) will have opposite effects. Expenditures of all types will tend to be reduced, but principally expenditures on domestic goods and services (because expenditures of this kind are in all countries larger than purchases of foreign commodities). A relative decline in the prices of these articles and of the factors used in their production will tend to take place, possibly spreading to the export industries. Credit restriction may be induced because of increased liabilities to foreigners (or actual loss of gold), and will reinforce the decline in income, expenditures, and prices, thereby facilitating adjustment.

(In the series of reactions described above, the smooth transmission of the loan installments requires an expansion of incomes in the borrowing country relative to those in the lending country sufficient to bring about such a shift in the international demands as to permit the continuous transfer

of the loan in the form of goods. This requisite change in relative incomes will be reduced, and the loan transfer facilitated, by a rise in the costs of production of B's exports and a decline in those of L's exports. It is apparent that if the secondary expansion of credit in B (or contraction in L) is prevented by offsetting action of the Central Banks, the entire burden of adjustment will be placed on the initial shifts in demand provoked by the direct international transfer of purchasing power. This means that unless the entire proceeds of each loan installment are spent on international goods, gold must soon flow from L to B, and continue so to move as long as loans are being made. Ultimately the lending country will be faced with the necessity either of making effective a severe deflationary policy, of imposing restrictions on the export of capital, or of abandoning the gold standard. In other words, an essential of smooth adjustment is a liberal credit policy in B and/or a restrictive credit policy in L.

Thus if domestic conditions in the borrowing country (*i.e.*, fear of generating a boom) prevent its Central Bank from inaugurating an expansion of credit, or if disinclination to provoke deflation rules in the lending country, autonomy of central bank action may prove an effective obstacle under gold-standard conditions to adjustment to this type of disturbance in the balance of payments.¹ Similarly obstructive would be the imposition, in B, of higher tariff duties, since by reducing the demand for imports the transmission of the loan in the form of goods would be impeded.

That this discussion is not divorced from reality may be readily indicated. In the decade of the '20's, the payment of war debts to the United States (and of reparations by Germany to the Allies) was rendered more difficult on the one hand by the increase in our tariff barriers that took place

¹ Similar reasoning holds of lasting changes in international demands. See p. 229 ff. We have already indicated (pp. 236-239) the way in which pursuit of a monetary policy directed toward the maintenance of business stability may, in the case of a country suffering from technological backwardness, be incompatible with the requirements of international adjustment under gold standard conditions. A monetary policy which encouraged expansion in

in 1921 and 1922, and on the other hand by our failure to permit the large inflow of gold from Europe to bring about a multi-proportional expansion of credit. Indeed, our restrictive credit policy of 1928-29, inaugurated for reasons wholly connected with the domestic situation, forced a similar policy upon our debtors, thereby reenforcing the deflationary tendencies already apparent abroad. But for our large volume of foreign lending in these post-War years, the difficulties inherent in the transfer of war debts and reparations under the conditions cited would have come to light much sooner.

The problems connected with a disparity of international costs are well illustrated by the case of England after her return to the gold standard in 1925. The selection of the pre-War gold parity by that country left her exporters in a serious predicament, since their costs were still 10% or more above the level of those of their competitors in other gold standard countries, while unemployment in the exporting industries was already large. Balance of payments equilibrium was preserved by an outflow of gold and a gradual accumulation of short-term foreign funds in London, but the extreme resistance of trade unions to a reduction of wages (supported by the presence of the dole) as well as stickiness of other costs effectively prevented the attainment of full international equilibrium. Instead, England was forced to maintain a restrictive discount policy, to carry a large volume of "dead-weight" unemployment, and to see her export industries lose ground relative to those of other nations. Even the maintenance of equality in her balance of payments was dependent upon the precarious item of short-term international lending, of which more presently.

(b) *Obstacles to Adjustment.* — Since the restoration of full equilibrium, after the introduction of a serious disturbance, depends upon a process of adjustment through changes in relative incomes and prices, anything which interferes with

domestic industries, thereby permitting absorption of unemployed export workers, would be best calculated to maintain stable industrial conditions, but it would also tend to aggravate the disequilibrium in the balance of payments.

this process will prevent the reestablishment of equilibrium. Even though a large outward flow of gold may be obviated by the movement of short-term credits, the underlying situation will continue unstable and even dangerous. The foregoing discussion has brought to light three types of obstructions to the necessary adjustment, obstructions which have seriously hampered the working of the gold standard since the War. These are: (1) autonomous central banking policies, (2) changes in tariffs, unrelated to the requirements of the balance of payments, and (3) price rigidities. Whether justifiable or not, the idea of employing credit policy in the interests of national stability has enjoyed an increasing vogue. Indeed, it is doubtful if a single country can be found today whose monetary authorities would be willing to subscribe to the doctrine that their credit policy should be determined by gold movements and the state of the foreign exchanges. And while protective tariffs were, with two or three exceptions, universally employed before the War, the tariff policy of nations was relatively stable, directed toward the settled goal of providing "adequate" protection for domestic industry. Frequent upward revisions of duties were not undertaken, nor were tariffs used to cope with difficulties arising from disturbances to the balance of payments.

Now there is little or no indication that these inharmonious factors will become less prominent in the future. Certainly, unless there is an unforeseeable reversal in the attitude of governments and peoples, national independence with respect to credit and tariff policy may be postulated as a given datum for some time to come. Moreover, the continued spread of labor organisations, of various forms of unemployment insurance and relief, and the growth of large-scale industrial establishments cannot but lead one to believe that the area of flexible prices is more likely to diminish than to increase. If these conclusions be valid, the difficulties with which the gold standard has had to contend in the last two decades will continue to plague it, and must be taken into consideration in arriving at a judgment with regard to what international

monetary arrangements are likely to be most suited to the future.

While the three aforementioned factors have provided almost constant opposition to smooth functioning of the gold standard, furnishing it with an ill-suited economic environment, the political atmosphere of recent years has been equally unfavorable. The spread of dictatorships with an unpredictable but ominous foreign policy, the chronic fear of war which has hung over Europe, the frequent internal dissensions between Left and Right in many countries — all have bred a general political situation of unparalleled instability. Though itself in considerable degree a consequence of economic disequilibrium, this political uncertainty has in turn exerted a seriously adverse influence upon the economic sphere. Long-term investment has been severely depressed, people almost everywhere preferring to invest their funds primarily in assets of the most liquid type. Foreign investment in particular has suffered, the large volume of international lending of pre-War days and of the prosperous '20's having almost completely vanished. What has remained has been principally of a short-term character.

This leads us to a consideration of the rôle of short-term international loans. In normal times, these respond to financial and commercial needs and to speculative opportunities, and furnish, as we have seen, an important adjustment item in the international accounts. When, owing to a disturbance in a country's balance of payments, its exchanges are depressed and its bank rate is raised, short-term capital tends to move toward this country, reducing the necessity for an outflow of gold and serving to fill the gap in the balance of payments and to support the exchange rate. (Normal movements of short-term credits are thus, like gold movements, adjusting in nature. It is quite otherwise in times of political and economic unsettlement.) Then, the prospect of a change of government, of a possible currency devaluation, or of an aggressive act provocative of international tension, may quickly generate panic fears which operate in a fashion

analogous to a run on a bank to produce a run on a country, stripping it at once of its short-term borrowings and of its gold. Against such a situation, a rise in the discount rate is impotent. The run may be stopped by direct intervention, as in the German standstill agreement of 1931, or it may lead to abandonment of the gold standard, as with England shortly after the German debacle. Only when the country's gold reserves are very large can it be permitted to go on unchecked. The point to be emphasised is that in unsettled times, instead of performing an adjustment function, short-term credits themselves may easily become a further disturbing factor. Their mere presence in a country then constitutes a source of potential danger.

The difficulties in the way of a smooth functioning of the gold standard, under present and probably under future conditions, are formidable. Whether they are so great as to be insurmountable, we shall attempt to estimate in considering the monetary prospects of the future.¹ At this point, however,

¹ Brief mention should be accorded one further obstacle to the smooth operation of the international gold standard: namely, the extremely uneven distribution of the world's monetary gold supplies. While even in 1929 the inequality in national holdings was noteworthy, by 1937 it had become extremely striking, as the accompanying table shows:

DISTRIBUTION OF THE WORLD'S MONETARY GOLD RESERVES

	(In Millions of Dollars)				(In Percentage of Total)			
	1913	1920	1928	1937	1913	1920	1928	1937
United States	1,290	2,451	3,746	12,741	26.6	33.9	37.4	53.4
France	679	686	1,254	2,428	14.0	9.5	12.5	10.2
England	165	754	748	2,689 ^a	3.4	10.4	7.5	11.3
Russia	786	—	92	—	16.2	—	.9	—
Germany	279	260	650	28	5.7	3.6	6.5	.1
Italy	267	206	266	208	5.5	2.8	2.6	.9
Japan	65	556	541	261	1.3	7.7	5.4	1.1
Other countries	1,326	2,326	2,731	5,496	27.3	32.1	27.2	23.0
Total	4,857	7,239	10,028	23,851	100.0	100.0	100.0	100.0

Source: for 1913, 1920, and 1928, Federal Reserve Bulletin, 1933, pp. 368-371; figures being for the end of December; for 1937, Federal Reserve Bulletin, 1937, p. 1262, figures being for the end of September.

^a Figures for the holdings of the British Exchange Equalisation Account are not included; on March 31, 1937, the first official announcement made reported these holdings to be \$943,000,000.

(Footnote continued at bottom of next page.)

exports to shrink, with the result that exchange rates will go against the high-cost nation. This will in general check imports and restore exports. Equilibrium will be attained when the rate of exchange brings the two price systems into stable relationship with one another. The price of its attainment, instead of a deflation of internal costs together with an adverse movement of the barter terms of trade, will be the latter combined with some realignment as between industries.

(The absence of any need for general inflation or deflation as part of the adjustment mechanism is an outstanding characteristic of paper currencies in their international aspects.¹ It is this feature which has won much of the increasing support observable in recent years for managed paper currencies and free exchanges. For the process of deflation necessary for adjustment to certain situations under gold standard conditions is painful and long drawn out.² Compared with it, fluctuations in exchange rates effect the requisite adjustment comparatively

¹ Relative inflation, in the sense of an increase in total income, is only necessary to accomplish adjustment (e.g., to a loan transfer) to the extent that there is an offsetting movement of short-term credits. Such movements, by supporting the rate of exchange, prevent it from functioning so fully as a means of producing adjustment. Thus if the entire supply of exchange furnished by current long-term borrowings is wanted by banks in the borrowing country to build up foreign balances or to lend abroad on short-term, no change in exchange rates will occur. New bank deposits equal to the sum borrowed will be created. These, when spent, will constitute a net addition to income. The situation would then be essentially similar to that under gold-standard conditions, requiring a further *secondary* expansion of income to effect adjustment — unless, as would doubtless be the case, further borrowings were not matched by an increased desire for foreign balances, but led to a drop in the exchanges. (See pages 254-258.)

² Notably was this true in the case of the return of Great Britain to an over-valued pound in 1925, and in the case of many agricultural countries during the depression. The high level of costs in the former country compelled a more or less continuous deflationary policy by the Bank of England, which was to a considerable extent responsible for the large volume of chronic unemployment in England, even during the relatively prosperous years of the late '20's. Agricultural countries, faced during the depression with a rapid decline in the prices of their exports, the demand for which was relatively inelastic, and with large fixed items on the debit side of their balances of payments (e.g., interest on former borrowings), lost gold heavily. According to the theory of the gold standard, this should have deflated incomes and prices sufficiently to reestablish equilibrium in their balances of payments. The required adjust-

rapidly and with less general internal disturbance. It is not to be denied, however, that such fluctuations themselves entail price changes (especially in the export and import categories). These are, indeed, inevitable and uncomfortable. Accommodation to change is always disturbing. The question at issue is merely under what monetary conditions the consequences are likely to be least unpleasant, and on this score the advantage seems to lie with paper currencies and free exchanges rather than with gold and fixed exchanges. Whether free exchanges involve additional disadvantages which more than offset this primary advantage will be considered presently.

(b) *Fluctuations in Exchange Rates.* — (i) General Considerations. A common charge levied by supporters of the gold standard against the establishment of a world of paper currencies is that fluctuations in exchange rates would be so frequent and so large as to be themselves a source of disturbance, uncertainty, and disequilibrium. Without going into this question fully at this point, we may indicate that violently fluctuating exchange rates, of the sort implied in this charge, are accompaniments of equally unsettled economic conditions, such as immediately followed the World War. During that period, not only were movements of exchange rates frequent and of large dimensions, but they were also — partly because of widespread speculation — self-inflamatory or disequilibrating rather than stabilising in nature. But in view of the immense budgetary difficulties of those years, which were a direct consequence of the War and which made all semblance of currency stability impossible in many countries, the results were not surprising. To base our criticisms of managed paper currencies upon evidence drawn from a period when effective control was impossible, as many appear to do, is obviously grossly unfair.

In the face of the severe troubles of recent years, which

ment was so harsh, however, that these countries without exception preferred to abandon the gold standard and to introduce, as well, exchange control to prevent the full impact of exchange depreciation from being felt.

wrecked the gold standard, countries with paper currencies have fared relatively well, and while fluctuations in rates of exchange have naturally been much greater than would be possible under the gold standard, they have been neither violent nor seriously disequilibrating. With three or four notable exceptions, explainable in terms of threatened devaluation or political uncertainty, the movements of sterling exchange against the currencies of the continental gold bloc were confined, during 1935 and 1936, within a range of close to 10 per cent. The rates of exchange between the currencies of the sterling (paper) bloc have been remarkably steady. Under reasonably stable conditions, exchange rate movements may be expected to be of an equilibrating nature, correcting existing maladjustments in a manner more rapid and probably less disturbing to the economy as a whole than the process of income and price changes that must take place under the gold standard.

(ii) The Operation of Exchange Stabilisation Funds. The assumption, implicit in many criticisms of a system of free exchanges, that exchange rates would be at the mercy of every slightest disturbing breeze, overlooks the recent development of exchange stabilisation funds, which have been and will undoubtedly continue to be used to prevent such temporary and therefore undeniably disturbing movements. Stabilisation funds are now employed by Great Britain, France, the United States, Switzerland, the Netherlands, and many other countries. Essentially they are exactly what their name implies — resources put at the command of governments or central banks to be employed in ironing out transient fluctuations in exchange rates, in particular those resulting from movements of short-term capital. It is not intended, and it would be impossibly costly if it were the purpose, to employ the funds to prevent movements in exchange rates which are necessary to effect lasting adjustment to international change.

In describing the operation of exchange stabilisation funds, a distinction must be drawn between what Kindleberger has

called, the credit and the gold type.¹ The Exchange Equalisation Account of Great Britain is the only true representative of the former, while the stabilisation funds of the United States, France, Switzerland, and other countries are of the gold type. Since it offers the greatest interest for the future, we may concentrate our attention upon the credit type in use in Great Britain.

When the international value of sterling is rising under the pressure of an inward movement of short-term capital, the Exchange Equalisation Account sells Treasury bills (a pre-determined amount of which are in its possession)² to commercial banks or to the money market generally and acquires sterling balances. This sterling is then used to purchase foreign exchange and gold. In effect, Treasury bills are exchanged for foreign assets. Thus the inflow of foreign funds is offset by the current acquisition of foreign balances or gold, which can be sold against a later withdrawal of the foreign-owned sterling balances. In this manner both the money market and the exchange rates are protected from fortuitous influence on the part of short-term capital movements, which are simply canceled as they flow into or out of the country. Indeed, although the original purpose of the British fund was to stabilise sterling exchange rates, when it became apparent that operations to this end also automatically served to insulate the London money market from the effects of short-term capital movements, money-market stabilisation also became a direct objective of the use of the fund.

¹ C. P. Kindleberger, *International Short-Term Capital Movements*, Chapter XIII. For an excellent account of stabilisation funds and their operation, the reader is referred to this source. For a more elaborate discussion of the history and principles of the British fund, see N. F. Hall, *The Exchange Equalisation Account*, Macmillan & Co., London, 1935.

² The British Exchange Equalisation Account was established in the spring of 1932, being provided at that time with £150 millions of Treasury bills which it could sell in the London money market to acquire sterling funds. In the budget of 1933, this figure was increased to £350 millions. The American Exchange Stabilisation Fund was set up as a Treasury agency on the occasion of the devaluation of the dollar in January, 1934, when \$2,000,000,000 of the government's profit from devaluation was turned over to it for exchange stabilisation operations. Originally given a life of two years, the fund has since been continued by Presidential proclamation.

It is with respect to the effects of stabilisation fund operations upon the money market that the chief reason for drawing a distinction between credit and gold funds is seen. For the latter, since their resources consist either of central bank deposits or of gold (which is converted into central bank deposits in the course of using the fund), cannot be brought into action without affecting the reserve position of commercial banks. Thus when the American stabilisation fund is used to support a weak foreign currency, say the franc, gold certificates are deposited with the Federal Reserve Bank of New York, and checks are drawn against this deposit to purchase franc balances. Thereby Federal Reserve funds are put at the disposal of the banking system.

It is this defect of our fund, indeed, which forced the Treasury to adopt a procedure very similar to that followed by the British Exchange Equalisation Account. During 1935 and 1936, the inflow of gold from abroad was of such magnitude that by September of the latter year, excess reserves of member banks topped three billion dollars. To prevent further gold inflows from nullifying the effects of the increased reserve requirements which were put into effect by the Federal Reserve Board, the Treasury in December, 1936, adopted the practice of selling government securities to commercial banks and of using the demand deposits so acquired to buy up the inward-moving gold.

Thus it appears that stabilisation funds of the gold type are of use only in providing specific resources for the purchase and sale of foreign currencies with a view of moderating fluctuations in exchange rates. Since operations of this nature could equally well be undertaken by a central bank, the only advantage of a separate stabilisation fund would appear to arise from the secrecy with which it can operate, a secrecy denied to central banks because of the necessity of publishing frequent reports.

It is possible only for the credit type of fund to insulate its money market from the disturbance of inward movements of short-term foreign capital. Such funds can immobilise bal-

ances' acquired by foreigners by providing, in the form of Treasury bills, assets in which these balances can be invested. When foreigners wish to withdraw their loans, the foreign assets previously acquired by the stabilisation fund can in effect be turned over to them in exchange for the Treasury bills earlier issued. Gold funds, on the other hand, are helpless to prevent an inward movement of short-term foreign capital from easing the money market, for they purchase the foreign exchange offered with reserve balances. When capital moves out, foreign assets are sold against reserve balances and the money market is tightened.

As we have already noted, exchange stabilisation funds can scarcely be used to prevent movements in exchange rates of paper currencies which represent a response to basic changes in the balance of payments. To do so would require almost unlimited resources. They can, however, ease and moderate the transition to a new level of exchange rates. Thus in the case of an international movement of long-term capital, the borrowing country's currency will tend to rise against other currencies. This rise may be slowed down by the purchase by the stabilisation fund of part of the offerings of the lending country's currency. Similarly, the stabilisation fund of the lending country could moderate the decline in its currency's international value by the sale of foreign assets in its possession.

(c). *Supposed Dangers of Paper Currencies.* — One of the chief defects charged against paper currencies is that without the check provided under the gold standard of a strictly limited gold reserve, violent inflation is inevitable. This possibility has been amusingly stated by D. H. Robertson in the following parable :

It is said that there was once a mine manager in Johannesburg who had a glass eye. When business called him away he would take his eye out and leave it in a prominent place; and while the master's eye was on them the workmen continued to work like blacks, as indeed they were. But one day one of the workmen, more daring than the rest, stealthily approached the all-seeing orb and covered it up with an inverted cigarette tin: whereupon

he and all his fellows promptly went away and got drunk. Which is a parable of what might happen if all semblance of a gold standard were obliterated.¹

While it is possible that the replacement of gold by paper currencies might be conducive to pronounced inflation, there are two reasons for believing this view involves exaggeration. In the first place, even monetary systems based on gold are nowadays managed currencies, with plenty of slack to permit sufficient inflation to engender a disastrous boom, followed by depression. The post-War boom of 1919-20 in the United States, when the wholesale price level reached a point 150% above the 1913 level, occurred while the United States was on the gold standard, as did many earlier industrial fluctuations in this and in other countries. The period 1922-29 in the United States, often characterised (whether justly or unjustly is irrelevant to the present discussion) as an "orgy of credit inflation," was also one during which the gold standard was in force. Paper-currency systems, it appears, are not the only ones which permit serious inflation to occur. The limit imposed by gold reserves is apt to be one — particularly in the United States, with its immense reserves — which only becomes effective when it is too late.

The second ground for believing the danger of inflation under paper to be exaggerated is that there is just as much reason, no more and no less, for desiring effective monetary management under paper- as under gold-standard conditions. The consequences of poor management are identical under both sets of circumstances. Being equally serious, they are equally to be avoided. Therefore it is reasonable to assume that the monetary authorities will make just as serious an effort at effective management where the standard is paper as where it is gold.² It is easier for a car to skid on wet roads

¹ D. H. Robertson, *Money*, pp. 147-148.

² This argument, it is true, is less valid with respect to backward countries, where even fairly intelligent monetary management is not to be expected at present. In those regions, where, as with the "blacks" in Mr. Robertson's parable, self-restraint is uncommon, the gold standard might provide a needed check. If paper standards were universally adopted, these countries might

than on dry; this fact does not increase the carelessness of drivers, but rather makes them more conscious of danger.¹ Recent experience with paper currencies in Great Britain, Sweden, and other countries indicates that management may be equally if not more effective than when the gold standard rules, while many of the difficulties of the latter can be avoided. Where the goal of management in the interests of industrial stability is accepted, as it is in the leading nations of the world today, the assumption that the nature of the standard will determine adherence to or abandonment of the goal and of the rules of appropriate monetary behaviour is certainly unwarranted.

Finally, it remains to point out that in the past, truly violent inflations, more serious than cyclical booms, have with few exceptions been the consequence of wars. Against the inflationary forces engendered by a major war, the gold standard or any other currency system yet devised can offer little resistance.

Closely allied to the belief that paper currencies are provocative of inflation is the fear that their existence tends to bring on currency warfare, by which is meant a competitive depreciation of the foreign-exchange value of currencies with the object of stimulating exports. Such depreciation requires that the foreign value of a currency be forced below its internal value so that prices within the country are low in terms of foreign currencies. Now under conditions of free exchanges, this result can be attained if the monetary authorities offer additional supplies of domestic currency against foreign currencies (e.g., dollars against francs). It is to be noted, however, that in a world of free exchanges, this procedure involves

have to learn decent monetary behaviour from experience. It is to be doubted, however, if even there the gold standard is as effective a restraining influence as is supposed, in view first of the fact that these countries frequently abandon that money base, and second, as Professor Whittlesey has suggested, that monetary reform in such countries may be more in the nature of misleading advertising for the benefit of foreign investors than anything else. (See Whittlesey, C. R., *International Monetary Issues*, pp. 165-166.)

¹ Approximately 75% of both fatal and non-fatal motoring accidents in the United States during 1937 occurred on dry streets or highways.

grave risks. For two can play at this game, and the nation which buys foreign money may lose heavily on its holdings if the other country or countries retaliate, as they are likely to do. The very prospect of *competition* in depreciation, then, tends to hold it in check, much as price competition between large industrial units is restrained by similar fear of the consequences. This check does not operate in a world of mixed currencies, some on gold and some off, for then the currencies of gold-standard countries can be bought with the assurance that *relative* to them, the international value of the depreciating currency will fall. Moreover, the risk that is present where all countries have abandoned the gold standard is much reduced, since the purchase of gold-standard currencies amounts to investment in an asset which, so long as the connection with gold is maintained, is most unlikely to depreciate seriously in terms of paper currencies. Thus a mixed system of currencies is most favorable to exchange depreciation, universal paper currencies least favorable.¹

The two chief counts lodged against paper currencies and free exchanges have to do with their consequences with respect to international trade and investment. Let us first examine the relation between fluctuating exchanges and foreign trade. It is alleged that if the exchanges are free to vary, movements in exchange rates will act as a severe deterrent to international trade, greatly reducing its volume and therewith the degree of international specialisation. If this were true, standards of living would inevitably suffer. The basis for this view is that the possibility or probability of exchange-rate fluctuations introduces an additional large element of risk in international trading which cannot but prove deterrent. An American exporter of cotton, for example, may on a certain date quote a price to a British importer of £10 for a 500 lb. bale, on the basis of a current exchange rate of \$5 to the pound. On the

¹ As Professor Whittlesey points out, undervaluation of a currency can be maintained for some time under the gold standard, provided prices in a country are low relative to prices abroad and the resultant imports of gold are sterilised. The argument of the above paragraph is based on Whittlesey's discussion of the point, *op. cit.*, pp. 35-42.

assumption that the competitive price of cotton in New York is 10¢ a lb., this sterling quotation will yield \$50 for each bale, an amount equal to what could be realised in the New York market. If, however, the cotton is not to be shipped and a bill of exchange drawn until a month later, the American exporter stands to lose if the dollar price of sterling falls in the meantime, or he may gain if it rises. In any event, there is a risk of possible loss as well as a chance of gain to be added to the ordinary risks of commerce, a risk which, if it could not be avoided, would in all probability serve to confine international trade to the more speculative dealers.¹

Traders have available, however, a simple means of avoiding the possibility of loss (and of gain) from exchange-rate fluctuations, for it is open to them to hedge by purchases or sales of forward exchange. In the foregoing illustration, the American exporter of cotton will quote a price in sterling based upon the existing forward rate for bills of the duration in question, say 90 days. If this rate is also \$5, the quoted price will be

¹ In his discussion of this point, Professor Whittlesey (*op. cit.*, pp. 81-85) conceives the risk to depend upon whether the transaction is carried out on a cash or credit basis. In his view, no exchange risk exists in the case of a cash transaction; it is only present when payment is deferred. This would be true only if, in terms of the illustration given, the bill were always drawn at the same time that the price is quoted. In that event, whether the price were quoted in £ or in \$, the American exporter would bear no risk, since he would dispose of his bill immediately at the current rate of exchange for either sight or long bills. On any sterling bill (payable in £), the British importer would also be subject to no exchange risk, which would appear to be borne by the American banker who bought the bill, since he would only acquire a sterling balance after the few days it takes to send the bill to London. His willingness to purchase long as compared with sight bills, however, would depend upon the relation between the discount rates in the two markets and the forward rate of exchange, and would be reflected in the price he offered for long sterling bills. Thus where the quotation of a price and the drawing of a bill are simultaneous, the exchange market allows for the risk in the spot rate for long bills.

Had the arrangement been that the British importer was to pay by purchasing a dollar draft, he would naturally not do so until the arrival of the goods. Hence in this situation he would be subject to a risk of a rise in the sterling price of dollars, exactly parallel to the risk borne by the American exporter in the text above. Thus it appears that so far as exchange risks (uncertainty as to the price one will get for foreign currency) are borne by *traders*, whether the transaction is for cash or on time is irrelevant — what is important is the possibility of exchange fluctuation between the time the contract is entered upon and the exchange is sold or bought.

the same, £10 a bale. If forward sterling is at a premium (above \$5), he will quote a slightly lower price; the opposite will be true if forward sterling is at a discount. Having made his price for a shipment of cotton, to be dispatched say 30 days later, he will then enter into a contract with a foreign-exchange dealer to deliver at that time the specified quantity of 90-day sterling, at the existing forward rate of \$5. When the 30 days are up, he simply turns over to the dealer his bill on the British importer and is paid at the agreed rate. Thus the trader avoids all risk from exchange fluctuations, transferring it to a dealer who specialises in such matters and who by matching purchases with sales, reduces his possible risks to a minimum. The leading money markets at present quote forward rates on all the more important currencies, thus providing for the bulk of world trade the means of hedging against movements in the exchanges. In those countries upon which no forward quotations are available, they could be provided at relatively small expense by the central banks.

We may now turn to a consideration of the relation of fluctuating exchanges to foreign investment.¹ The opinion is widespread that stable exchanges and in particular the gold standard are essential to free international movements of capital. This view is based upon the conviction that variations in exchange rates, by introducing an additional possibility of loss on both interest and principal of international loans, will seriously deter lenders from advancing funds to foreigners. Less emphasised is the prospect that fluctuating exchanges may also increase the difficulties of transfer for the borrowing nation, thereby reducing the incentive to borrow. Both these aspects must be considered.

With free exchanges the external value of the currency of either borrower or lender may appreciate or depreciate in terms of the currencies of other countries. For a complete

¹ The discussion in the following paragraphs is based principally upon that of Professor Whittlesey, which is the most thorough and up to date available, to my knowledge. His analysis is naturally fuller and more detailed, and should be consulted by the interested reader. See his *International Monetary Issues*, Chapter VII.

analysis of the problem of international investment under a regime of paper currencies, there are these four possibilities which must be taken into account. Let us begin with variations in the international value of the lending country's currency. This approach is in accord with actual practice, since most international loans are made payable in the lender's money. Where this is true, it is clear that fluctuations in the external value of the lender's currency, whether upward or downward, will be of no more moment to the lender than in the case of a loan to a domestic borrower, since in either event he is assured of payment of interest and repayment of principal in the same monetary unit.

The borrowing country, on the other hand, which must meet the service on its debt in the long run by the sale of its exports, will find this more difficult if the lender's currency appreciates, less difficult if it depreciates relative to other currencies, including the debtor's. For a rise in the external value of the lender's currency increases the cost of acquiring it, and this increases proportionately the burden (in terms of its own money) of the borrower's debt service, without at the same time increasing to a like degree the value of its exports. This is true because the debt requirements are stated in the creditor's money, which is assumed to have appreciated relative to other currencies, while ordinarily the debtor's exports are sold in world markets. So far as the creditor is a buyer of these goods, its demand for them will tend to expand, the degree of this expansion depending upon the elasticity of demand, the elasticity of competing supplies in the creditor country, and the trend of total income in that country. (Since appreciation in the foreign value of the creditor's currency is likely to be taken as a sign of deflation, the movement of its total income is apt to be unfavorable to an expansion of imports.) There is no *a priori* reason, however, to expect purchases from the debtor by the creditor to rise or imports from the creditor to the debtor to fall sufficiently to counterbalance entirely the increase in the debt charges, though some partial compensation may come from this source. The debtor country, therefore, will be

faced with an adverse change in its balance of payments, which will tend to cause a depreciation of its currency *vis à vis* those of all other countries. Similar reasoning leads to the conclusion that a depreciation of the currency of the lender will tend to bring about an appreciation in the exchange value of the borrower's monetary unit.

Unless, however, it is assumed that very considerable variations in exchange rates (particularly of creditor countries) are to be expected, the secondary or induced appreciation or depreciation of the currency of a debtor country is unlikely to be of a serious magnitude. For the change in the cost of the debt service is a change in only a part of all the debit items in its balance of payments, while the ensuing alteration in the external value of its currency is *general*, affecting all items on both sides of the balance (including, of course, the service of debt itself). Hence a given percentage change in the exchange rates on the creditor country would be provocative of a much smaller percentage change in the external value of the debtor's currency, the degree of its smallness or largeness depending on the relative importance of the debt payments. Except in times of extraordinary disturbance, therefore, induced variations in the exchange value of a debtor's currency should not prove serious, since the initial fluctuations in the exchange rates on the lending country are unlikely to be large, while the debt service is only a fraction of the total sums owed by the debtor. Moreover, these fluctuations produce some compensating effects on the borrower's imports and exports.

Consider now the effects on the borrower's position of changes in the external value of its own currency. Still assuming the debt is expressed in the lender's money, exchange depreciation in the debtor country will increase the cost, in terms of its own currency, of the debt service. At the same time, however, since the rate of exchange on all other currencies has risen, the domestic prices of both imports and exports will rise.¹

¹ As we have seen, there will be certain exceptions to this rule; see pp. 270-272.

With relatively elastic demands, the usual case, the total value of imports into the debtor nation will decline, the total value of its exports increase. In this way the foreign exchange necessary to meet the payments on the debt will be provided.

By a similar but opposite process, adjustment would be made to an appreciation of the borrower's currency. This, however, is apt to be of much less practical significance, for appreciation of its currency on the exchanges, by retarding exports and stimulating imports, will have a net deflationary influence, which is almost certain, in these days of managed currencies and popular opposition to deflation, to be counteracted by internal monetary expansion.

From the strictly economic point of view, if variations in the external value of the borrower's money do not increase its difficulties in meeting its debt payments and thus raise the likelihood of default, then with the debt expressed in its own currency, freedom of the exchanges should give the lending country no concern. The willingness of lenders to lend should be in no way affected. It must be recognized, however, that a thorough understanding of the relationship of free exchanges to foreign lending is not widespread. Here, as in other fields, the purely economic consequences of a given set of facts, the only ones which are logically relevant, may not govern the actions of men who are not completely rational. Instead, prejudice or misunderstanding may determine their convictions and their acts. The influence of deep-rooted though unreasonable beliefs is of particular importance where, as in the case of foreign lending, confidence is at stake. If potential lenders are suspicious of paper currencies but strongly predisposed in favor of the gold standard, then even though their suspicions may be based entirely on evidence from periods of abnormal disturbance and their confidence in the gold standard on a failure to recognize the drastically changed and unfavorable conditions under which it must operate in the future, nonetheless their irrational prejudice will be decisive with respect to their willingness to lend to countries

not on the gold standard.¹ As one writer has expressed the matter:

Bankers are notoriously conservative, and they are reluctant to change their view regarding the necessity of having a gold standard. If they have convinced themselves that the gold standard is essential to foreign lending, then so long as this conviction prevails, the gold standard is essential, whether there is any other reason for its being necessary or not. But at a time such as the years 1931-36, when a half-dozen factors existed that would make capitalists unwilling to lend abroad, one obstacle more or less made very little difference. The permanence of this barrier to foreign investment may well be doubted. The present attitude of British and Scandinavian bankers and businessmen indicates that even bankers can change their views and become enthusiastic for a nongold currency. When business leaders in Sweden were asked whether they desired any change in Sweden's managed currency policy, all answered in the negative and indicated their reliance upon the Bank of Sweden to prevent any decline in the general price level.²

One further word. In all the foregoing discussions it has been tacitly assumed that free exchanges mean fluctuating exchanges. The possibility that with a universal system of paper currencies day-to-day variations in exchange rates would be little if any greater than under the gold standard, with infrequent and gradual changes taking place in the relative values of different currencies as major sources of maladjustment arose and had to be worked out, is a prospect which has frequently been overlooked. That this might in fact be the actual result of such a system is, however, a strong likelihood. Recent experience on the part of the sterling bloc is significant on this score. Of course, given a major upheaval such as the recent depression, exchange fluctuations would be

¹ Most of the opposition to paper currencies appears to rest upon evidence drawn from periods such as those immediately following the War, when fluctuations in exchange rates were frequent and extreme, while familiarity with the gold standard bred from habit, together with a naive view of the simplicity and automatic nature of its operation, is probably the chief reason for its popularity. On this point, see Whittlesey, *op. cit.*, Chapter II and pp. 162-166.

² Whittlesey, *op. cit.*, pp. 163-164. (The last sentence is a footnote in the original.)

bound to be more serious. It may well be asked, however, if such fluctuations would not be more endurable than a recurrent collapse of the gold standard (under modern conditions essentially a fair-weather standard), this collapse being preceded and accompanied by a resort to commercial policies of extreme protectionism and economic isolation.

THE PROSPECTS FOR THE FUTURE

In judging of both the ideal and the probable international monetary relations of the future, it is useful to consider the choice as falling somewhere along a scale bounded by two extremes. At one end of the scale would be the "automatic" gold standard, in which no control whatever would be exercised, gold movements responding to changes in the balance of payments, those gold movements in turn leading to proportional changes in the volume of credit. At the other extreme would be an equally "automatic" paper standard, the volume of currency and credit within each country varying not in accordance with any predetermined policy but following instead the fluctuating demands of business. Under such a system, variations in exchange rates, presumably frequent and probably considerable, would "adjust" the various national economies to one another. The one extreme would thus imply in the largest possible degree adjustment of the internal economy (through income and price changes) to changes in the balance of payments, while the other extreme would adjust balances of payments to changes in the various related economies, internal readjustments being of a much more limited character.

It goes without saying that neither of these two extremes would be acceptable. The absence in each of any internal monetary control would be rejected by all nations, while frequent movements of exchange rates are desired by no one. The essential problem in the field of international monetary relations is to reconcile so far as possible autonomy of domestic credit policy with reasonable stability of the exchanges.

Starting at the gold standard or fixed exchanges end of the scale, it is certain that any reorganisation of the gold standard to be acceptable must permit the retention of central banks and of their usual instruments of internal credit control, including the use of these instruments as a device for offsetting the effects on the reserves and deposits of commercial banks of inward and outward movements of gold and short-term credits.¹ Moreover, it is probable that the purchase of gold inflows with the proceeds of the sales in the open market of newly-issued Treasury bills, and the sale of gold holdings so acquired against outstanding Treasury bills, must also be included as a requirement of a reestablished gold standard. This practice was followed by the United States Treasury from December, 1936, until August, 1937; it comprises as well part of the operations of the British Exchange Equalisation Account.² It is a means supplementary to open-market operations of the central bank of sterilising gold movements produced by sudden shifts of short-term capital, and permits conservation of the open-market resources of the central bank for the more appropriate task of controlling the internal credit situation.

All these amendments of the pure or automatic gold standard, however, presuppose the maintenance of exchange rates fixed within narrow limits by the establishment in each country of a constant statutory price of gold. While the use of stabilisation funds to sterilise gold and short-term capital movements may effectively isolate domestic money markets from their disturbing effects, in particular guarding against the danger of a sudden withdrawal of short-term international funds, the other obstacles which have arisen to hamper the mechanism of adjustment under the gold standard are neither eliminated nor in any way tempered. Indeed, the very offsetting action of

¹ The device of a scale of alternatives has been used effectively in the clarification of this problem by Professor John H. Williams, in his paper, "The Adequacy of Existing Mechanisms under Varying Circumstances," *American Economic Review*, Vol. XXVII, Supplement (1937), p. 151. His discussion, to which my indebtedness will be obvious to the reader, should be consulted for a penetrating and judicious account of the problems of an international standard.

the provisions for gold sterilisation, by increasing the autonomy of national monetary systems, also enhances the possibility — in the absence of close international collaboration — of a disparate movement of costs and prices in different countries. Although each national monetary authority would certainly attempt to avoid severe inflation or deflation, it is at least doubtful whether central bankers yet possess the knowledge or technique requisite to stabilise the economy against serious industrial fluctuations. Failure of monetary policy in any single important country to check a boom or to prevent depression must then inevitably subject other economies to inflationary or deflationary pressure. Continued adherence on their part to measures of credit control felt to be best suited to domestic needs might lead to movements of gold too large, if inward, to be handled by the available technique of sterilisation, or if outward, to permit continued adherence to the gold standard. Also to be reckoned with is the prospect of variations in national commercial policy which, as we have already seen, may greatly increase the difficulties of international adjustment.

It should be apparent that the very nature of the compromise attempted, in the foregoing qualifications of the gold standard (between national autonomy with respect to credit policy and the basic principles of the gold standard) is fundamentally inconsistent. For national autonomy means independence from outside influences, while if the gold standard means anything, it is that fixed exchange rates are purchased by the prompt response of any given country to conditions in the outside world. It is highly probable if not entirely certain that the restoration of an international gold standard on such lines as those suggested, even were gold parities so skillfully chosen as to avoid the over- or undervaluation of any single currency,¹ would lead to the accumulation of numerous sources of maladjustment which on the first occasion of marked strain

¹ In view of the discussion in Part I, Chapter XI, over- or undervaluation must be regarded as relative to the equilibrium rate of exchange, and not as deviations from purchasing power par.

would force a widespread collapse of the international monetary system.

This opinion is shared by many, if not most, of the leading monetary authorities, and has led them to advocate flexible or tentative stabilisation on gold, in a manner not dissimilar to the solution embodied in the "gentlemen's agreement" between Great Britain, the United States, and France. That is, instead of decreeing once and for all (?) a fixed price of gold, each nation (or some at least of the more important nations) would agree to maintain a price fixed within certain limits. This gold price would be varied only within those limits, and then only after consultation with the other parties to the agreement. Valid reasons for making a change in the gold value of a country's currency might be (1) clear evidence that it was becoming over- or undervalued to such a degree as otherwise to require internal inflation or deflation as a corrective, or (2) the appearance of international movements of capital (brought about by a disparity of business conditions between countries or by fear arising from political or economic conditions) so large as to endanger internal monetary control. Some such flexible provision, it is felt, would retain for considerable periods the advantages of fixed exchanges while permitting the fullest degree of national credit autonomy.¹ Variation in the exchanges, with its complex effects upon all nations, would be used only as a last resort.

Having reached a possible solution of the question of an international monetary standard by considering what alterations might be made in the gold standard to reconcile monetary autonomy with reasonably stable exchange rates, let us now approach the problem from the point of view of modifications in the paper standard.

¹ Most of the supposed advantages of fixed exchanges are, as we have seen, exaggerated. It is possible, however, that the comparative fixity of exchange rates derivable from tentative stabilisation would be sufficiently important as a support to confidence to warrant a preference for this system, as against any without anchored exchanges. Perhaps more important is the fact that with the price of gold fixed for relatively long periods, the settlement of international balances would be both more certain and less complex than under any currency arrangements permitting the exchanges to vary.

Starting at the extreme of a world of unmanaged or "automatic" paper standards, internal monetary control may be added as a *sine qua non* of any acceptable system of paper currencies. Internally controlled paper standards without any intervention in the exchange markets would without doubt also be unacceptable, if for no other reason than that no one deliberately wants fluctuating exchange rates. Moreover, as we have seen, although under a system of free exchanges adjustment to international change is effected principally through alterations in the balance of payments rather than through variations in internal incomes and prices, nonetheless fluctuations in exchange rates are by no means without serious effects on the internal economy. For those fluctuations alter either the prices or the demands for exports and imports, or both, and thereby influence the relative level of activity, employment, and incomes in the various industries within a country. Again, variations in the exchange rates of a single nation affect not itself alone, but also all other countries with which it has trading or financial relationships. Depreciation of the currency of an important nation, in particular, has in the past exerted and may be expected in the future to exert a deflationary pressure on prices in other countries, tending thereby to provoke a retaliatory depreciation of their currencies. While in a paper-standard world, currency depreciation might be less likely as a deliberate policy than in a system of mixed paper and gold currencies or than in a system of gold standards under severe strain, nonetheless actual depreciation may (or will) occur unless all nations not only pursue a common monetary policy but also execute it in step with one another. Thus an approach to the problem from this angle leads to the conclusion that in addition to internal credit autonomy, some means of guaranteeing a fair degree of exchange stability must also be provided. Just as rigorously fixed exchanges are incompatible with the desire for independence in the sphere of central banking policy, so likewise too great freedom of the exchanges is inconsistent with a highly complex and closely related world economy.

To the management of paper currencies would have to be added, therefore, some form of exchange stabilisation. It is entirely possible that international cooperation in the use of exchange stabilisation funds might furnish, over considerable periods of time, a degree of stability in exchange rates sufficient to meet the charge of critics that a system of currencies not tied to gold would fail to provide the necessary basis for confidence in international economic affairs. To achieve stability of exchange rates over considerable periods and within a rather narrow range would require the use of the exchange stabilisation funds for much the same purposes they (together with central bank reserves) would perform under a flexible or tentative gold-standard plan. Their use could not be confined simply to offsetting short-term capital movements, but would also have to be extended to counteracting other sources of international maladjustment (changing demand and supply conditions, the effects of divergent national credit or commercial policies, etc.) until it appeared that only by permitting exchange rates to be varied could serious internal inflation or deflation be prevented. To attempt much less than this would probably be to allow rather frequent movements in rates of exchange, which, although they have less serious effects on foreign trade and investment than has been widely held, nonetheless introduce instability of prices and therewith of activity and employment directly in the international industries and indirectly in other fields.

Both effective exchange stabilisation under a paper currency regime and flexible stabilisation on a gold base are very close together. Indeed, the only difference between the two is the place allocated to gold. In the one it need have no official position nor fixed price, though it might be used in the settlement of international accounts at a price which varied only occasionally. In the other it would have the accepted function of an international medium of payment, and its price would be fixed, perhaps only within limits and with reservations, yet for considerable periods of time. The modified gold standard would be simpler to operate in that it would

require less discretionary management of the exchange stabilisation funds than where these are continually used to prevent unwanted exchange movements. Exchange rates would automatically remain stable. Gold flows would continue as in the past, but could and would be offset so far as seemed necessary to preserve internal monetary stability. When these gold movements were in harmony with domestic monetary requirements, as in the case of an outflow during a boom or *vice versa*, they could be allowed to go on unchecked, since they would then merely reinforce the central bank's deliberate policy. On balance, because it is simpler to operate and because it fits in with established habit and prejudice, a gold standard with reservations as to fixity seems preferable to managed paper currencies plus exchange stabilisation. Practically speaking, it is also what we seem to be getting. The gold-standard countries of Europe have no inclination to abandon all ties with gold, nor is there any strong sentiment for such a step in the United States. Great Britain and the countries whose currencies are linked to sterling, on the other hand, may be expected, barring war or the reappearance of serious depression, to return to the gold-standard fold on flexible terms after a period of trial stabilisation under the "gentlemen's agreement."

It is of course true, as one writer has put it, that a compromise gold standard such as that described here "is an attempt to secure the best of two worlds, the fixed exchange rates of gold standards and freedom of price level adjustment of paper standards."¹ The same charge, however, may with equal justice be levied against any paper-currency system which aims at preventing fluctuations in exchange rates until it becomes apparent that these are required (in lieu of internal price and income changes) to bring about adjustment. Both systems strive, on the one hand to isolate the national economy from the shocks of external disturbance, on the other hand, if not to avoid necessary adjustment to external change altogether, at least to make it as painless as possible. In attempt-

¹ Whittlesey, *op. cit.*, p. 211.

ing to arrive at a resolution of these essentially antagonistic aims, the two approaches, from the gold-standard and from the paper-currency angle, are forced to compromise in a fashion which leaves them not very far apart.

SUGGESTED REFERENCES

Whittlesey, Charles R., *International Monetary Issues* (McGraw-Hill, New York, 1937).

Gregory, T. E., *The Gold Standard and Its Future*, Third edition (E. P. Dutton & Co., New York, 1935).

Wright, Quincy (editor), *Gold and Monetary Stabilisation* (University of Chicago, 1932).

Robertson, D. H., *Money* (Harcourt, Brace & Co., New York, 1928), Chapters IV, VI, VII.

International Economic Relations (University of Minnesota Press, 1934), pp. 90-99, also *Selected Memoranda* by Harry D. Gideonse, Melchior Palyi, William Adams Brown, Jr., and Henry C. Simons.

Royal Institute of International Affairs, *The International Gold Problem* (Oxford University Press, 1932).

Lloyds Bank Limited Monthly Review, December, 1935, Supplementary Number.

Williams, John H., "The Adequacy of Existing Currency Mechanisms under Varying Circumstances," *American Economic Review*, Vol. XXVII (Supplement, March, 1937), p. 151.

Hansen, Alvin H., "The Situation of Gold Today in Relation to Gold Currencies," *American Economic Review*, Vol. XXVII (Supplement, March, 1937), p. 130.

Keynes, John Maynard, *A Treatise on Money*, Vol. II, Chapters 34-36.

Gideonse, Harry D., "The United States and the International Gold Standard," *Annals of the American Academy of Political and Social Science*, January, 1934.

Meade, J. E., *An Introduction to Economic Analysis* (Oxford, 1937), Part V, Chapters II and III.

Harris, S. E., *Exchange Depreciation* (Harvard University Press, 1936).

Hall, N. F., *The Exchange Equalisation Account*.

Kindleberger, C. P., *International Short-Term Capital Movements*, Chapters XI-XIV.

International Economic Reconstruction, Report by Professor T. E. Gregory (Carnegie Endowment: International Chamber of Commerce, Paris, 1936).

The Improvement of Commercial Relations between Nations; The Problem of Monetary Reconstruction (Carnegie Endowment: International Chamber of Commerce, Paris, 1936).

CHAPTER XII

AUTARKY, OR NATIONAL SELF-SUFFICIENCY

INTRODUCTION

FOR some twenty years prior to the World War, the tariff barriers of the world, while not actually declining, were at least stable. Importers and exporters could rely on a continuance of existing conditions and conduct their business accordingly. As a consequence, in spite of widespread protective tariffs, the volume of world trade continued to mount about as fast as the volume of production. With the inauguration in the United States in 1913 of the Underwood Tariff, whose rates were notably lower than those of earlier schedules, there was even the possibility of a general movement toward more unrestricted trade.

All this was changed by the War, which violently disturbed all channels of international intercourse. In the first place, the outbreak of hostilities annihilated the large volume of trade between the belligerents, forcing each side either to do without goods formerly secured from the adversary, or to seek new sources of supply. Secondly, the tremendous demand for munitions and other military necessities stimulated the expansion or the development of industries devoted to their production. A wholesale reorientation of industry became necessary in the belligerent countries, and to a lesser extent in non-belligerent countries as well, to meet the new war demands. Finally, as a consequence of their preoccupation with the production of military requirements, the nations at war were forced to allow many of their export markets to go by default. Their exports were supplanted either by the expansion of exports on the part of non-belligerent powers and of the United States and Japan, or by the development of domestic production in their former markets.

One might conclude that with the cessation of hostilities, everything would revert to the pre-War status. This, however, would be to ignore the lasting effects of the nationalistic temper born of the conflict and of the industrial developments that had taken place. Military nationalism gave way to economic nationalism. This phenomenon was particularly conspicuous in the new and therefore excessively self-conscious states which took the place of the former Austro-Hungarian Empire, each of which surrounded itself by a high wall of duties. Even the United States, though a late-comer in the War and therefore relatively little affected, shared the prevailing nationalistic spirit and, in the Tariff Act of 1922, joined the procession toward higher protection. Industries producing war-time essentials everywhere received especially solicitous treatment. Again, those industries which had sprung up in the newer countries, as in the Argentine and Australia, to replace vanished imports clamored for and had little difficulty in getting ample protection. Reenforcing the effects of patriotic sentiment and industrial realignment was the disruption wrought by the extreme instability of many currencies in the immediate post-War years. Thus the early twenties saw tariff barriers rising to new heights, in company with the appearance of more directly restrictive devices such as import quotas, export prohibitions, and exchange restrictions.

There ensued, roughly between 1922 and 1925, a gradual return to normality, characterised by the gradual stabilisation of currencies and by the disappearance of the more violent forms of interference with trade. Few if any of the high post-War duties were reduced, however. By 1927 it became apparent to many that if prosperity were to be maintained, an unshackling of world trade was essential. This opinion was vigorously expressed by the members of the World Economic Conference which met at Geneva in that year. Nothing came of their pronouncements, unfortunately, since the conferees were neither the responsible heads of governments nor the representatives of interests sufficiently powerful to bring effec-

tive pressure to bear upon their governments. Therefore the prosperous decade of the twenties drew to a close still burdened with the unfortunate legacy of a high level of protective duties left over from the War and post-War years.

Early in the depression, in June, 1930, the prospect for world trade was seriously worsened as a consequence of the passage by the United States Congress of the Smoot-Hawley Tariff Act, increasing duties on many articles, and of the subsequent tariff increases inaugurated by many nations. With the intensification of the depression, as we have already seen, the situation rapidly became worse. On top of rising tariff barriers were piled manifold import quotas and exchange restrictions, accompanied by an increased use of the devices of administrative protectionism.

Perhaps even more important than the actual measures adopted was the spirit in which these various steps toward greater protectionism were taken, and to which in turn they provided support. For during the darkest days of the depression, between 1931 and 1934, the world was swept by a wave of isolationist sentiment which has rarely if ever been exceeded in intensity, and which has only lately shown some signs of receding moderately. As we have already seen, beside its manifestations, the protectionist measures of pre-War days seem comparatively mild. This same comparison holds true of the atmosphere in which, in the earlier and the later period, the concrete measures of policy were carried out. Before the War, the fundamental desirability of international trade was rarely, if ever, challenged. Each campaign for higher protection was waged by some group of special interests on the basis of an appeal to one or another of a varied assortment of arguments. Under the spell of recent events, however, there has been a strong movement toward the goal of national self-sufficiency, involving a rejection of the values of international specialisation. Something more seems to be at stake here than the usual case for protection, based as it is on arguments of distinctly limited applicability. Supporters of the movement feel that modern developments have driven us to the point

where salvation is to be achieved by a retreat from internationalism and a resort to autarky or national economic independence. Thus the eminent British economist, John Maynard Keynes, who, at least in 1933, was a convert to the cause, expressed his position in the following words:

But I am not persuaded that the economic advantages of the international division of labor today are at all comparable with what they were. I must not be understood to carry my argument beyond a certain point. A considerable degree of international specialisation is necessary in a rational world in all cases where it is dictated by wide differences of climate, natural resources, native aptitudes, level of culture and density of population. But over an increasingly wide range of industrial products, and perhaps of agricultural products also, I have become doubtful whether the economic loss of national self-sufficiency is great enough to outweigh the other advantages of gradually bringing the product and the consumer within the ambit of the same national, economic, and financial organisation. Experience accumulates to prove that most modern processes of mass production can be performed in most countries and climates with almost equal efficiency. Moreover, with greater wealth, both primary and manufactured products play a smaller relative part in the national economy compared with houses, personal services, and local amenities, which are not equally available for international exchange; with the result that a moderate increase in the real cost of primary and manufactured products consequent on greater national self-sufficiency may cease to be of serious consequence when weighed in the balance against advantages of a different kind. National self-sufficiency, in short, tho it costs something, may be becoming a luxury which we can afford, if we happen to want it.¹

And Mr. Keynes did want it, even though his desire was accompanied by some misgivings.

In view of the fact that the arguments on which advocates of economic nationalism rest their case appear somewhat different from, and broader than, the common protectionist arguments, it seems worth while to devote some space to a separate

¹ John Maynard Keynes, "National Self-Sufficiency." Reprinted from the Summer, 1933, *Yale Review*, copyright Yale University Press, by permission of the Editors.

consideration of this subject. Such a study may also throw some light on the reasons why countries like Germany and Italy have not only introduced a whole host of measures restricting international commerce, but also have attempted to force, through subsidies and otherwise, the development of industries capable of producing substitutes for essential imports. We shall consider the reasons advanced in support of national self-sufficiency, the causes which explain its recent appearance, some of the difficulties with which a nation attempting to become self-sufficient is confronted, and the possible alternatives to such a policy. Let us begin with the rationale of the movement.

THE RATIONALE OF NATIONAL SELF-SUFFICIENCY

There are four main reasons why national economic independence or self-sufficiency is felt to be desirable. Two of these are related to the danger of war. In the first place, those who regard war as inevitable reason that the best way to ensure success in the struggle is to become as independent as possible of outside sources of supplies. That nation is strongest, it is held, which can produce within its own borders not only its own munitions and armaments but also all those necessities of life which the civilian population as well as the army must have if a long struggle is to be endured. Advocates of this position, though they may realise the cost of carrying out a program of self-sufficiency, count it as unimportant in comparison with the attainment of the more vital goal of national power. The economic well-being of the people is a secondary consideration; it is important only so far as it enhances the nation's strength.

This argument has carried the most weight and been productive of the most striking results in Germany. In that country a combination of high protective duties, import quotas, and exchange control has limited imports drastically, the bulk of those remaining consisting of raw materials essential to the furtherance of the government's armament pro-

gram. Exclusion of foreign products has been accompanied by practically war-time economy in the use of domestic resources.

Thus, on November 24th, 1936, an instruction was issued that potatoes were to be pared as finely as possible and the parings were to be exchanged for firewood. Ten days later, the Hitler Youth were instructed to devote two days to collecting beech-nuts, from which a good table oil can be extracted. In January, an order was issued to organise the collection of food scraps, rags, scrap metal, skins, bones, etc. Many orders might be cited concerning economy in the use of scarce materials and the admixture of substitute materials. Thus from September 16th, men's clothing and uniforms were to contain 15% to 25% of artificial or regenerated wool, together with a certain percentage of local wool. On September 29th, it was ordered that, for the last quarter of 1936, cheese, with the exception of some special kinds, was not to contain more than 20% of cream. In October, the use of copper, zinc, nickel, lead and their alloys was forbidden for most building uses. On November 2nd, it was ordered that textile fabrics destined for the public service must contain up to 50% of artificial fibre. On January 1st, 1937, restaurant-keepers were instructed to replace lettuce and tomatoes by parsley, cucumbers and sugarbeet in the decoration of dishes. On the following day, shop-keepers were forbidden to advertise butter, margarine and lard, but ordered to reserve their advertisement for products such as sugar, marmalade, fish, potatoes, etc., the consumption of which is in the national interest.¹

Again, by a whole series of measures directed at the reorganization of agricultural production, Germany increased the proportion of foodstuffs locally produced from 65% in 1927 to 84% in 1936. Under the Four-year Plan RM 1,000 million is to be spent to increase the area of cultivated land by 1,200,000 hectares and to drain and irrigate land already under cultivation.²

Italy has also made vigorous efforts to become self-sufficient, in particular through land reclamation, the production of low-grade coal and coal substitutes, and the development of

¹ *World Economic Survey*, 1936-37, p. 150 (League of Nations Publications. II. Economic and Financial, 1937. II. A. 13).

² Data from *World Economic Survey*, 1936-37, pp. 151-152.

petroleum resources. According to Mussolini, complete autonomy with respect to petrol and lubricants will be achieved during 1938. Both Italy and Germany have pushed ahead rapidly in the production of synthetic rubber, whose cost, incidentally, is many times that of the natural product.

The appeal of self-sufficiency, however, is not limited to nations dominated by military ideology. The fear of war makes economic independence seem desirable to many in countries where pacifist sentiment is strong. This is notably true of the United States, where national isolation is urged as the most effective means of avoiding foreign entanglements which might lead us into war. Supporters of this viewpoint state their case somewhat along the following lines: At the present time a large foreign trade is essential to the prosperity of many of our most important industries. In the event of another world conflict, as in the War of 1914-1918, the maintenance of prosperity in our export industries will necessitate the extension of large credits to one or another of the belligerent powers, who will be too preoccupied with the production of military necessities to send goods in exchange for our exports. Inevitably, because of blockades, interference with neutral shipping, or domination of the leading sea routes, we will find ourselves lending support to one side in the conflict. Private loans will be succeeded by government loans, and government loans by direct participation in military operations. A "cash-and-carry" policy with respect to exports would, it is insisted, soon break down, since the "cash" available (foreign deposits in American banks, foreign-owned American securities, and gold) would be adequate for only a brief period. When these resources had been exhausted, the pressure from export interests and from many other sources for permission to extend credit, and later for government support for these credits, would — in view of the danger of industrial stagnation — become irresistible.

The only alternative to facing this sequence of events, it is urged, is to turn toward national self-sufficiency. We must

redirect our national energies into domestic channels, eliminating from our imports everything that can be produced at home and undertaking the production of these articles or substitutes for them ourselves. This policy could be accompanied by the building up, through government-financed purchases, of stocks of essential raw materials not available in this country, so that imports could be dispensed with when war breaks out. With respect to our military establishment, adherence to a policy of isolation would permit us to withdraw from the armament race and to frame a program suited to the requirements of national defense.¹

In addition to these two arguments for national self-sufficiency based on the danger of war, two others of a more definitely economic nature have bulked large in recent years. One of these is an old acquaintance, the dangers of specialisation, made somewhat more imposing by vigorous restatement and by emphasis upon the threat to domestic stability of dependence on international trade. One of the leading American spokesmen for economic nationalism has stated the argument in the following manner:

The maintenance of society is a problem of social equilibrium. In the absence of compensating controls anything that seriously affects one element in the social equation may have repercussions everywhere. Difficulties arising out of our own international policies and out of European troubles pyramided on defects and unsound policies in our domestic affairs and caused unnecessary troubles here. We should have managed domestic difficulties in ways which minimized the impact of world conditions. International troubles were always beyond any possibility of our control. Our only defense was to insulate ourselves against them. This we failed to do.²

Since we cannot control external sources of disturbance, let us seek internal stability by withdrawing into ourselves. So

¹ For an especially vigorous and readable statement of the case for isolation as a means of avoiding war, with a full realization of its implications, the reader should consult Quincy Howe, *England Expects Every American to Do His Duty* (Simon & Schuster, New York, 1937).

² Wallace B. Donham, "National Ideals and Internationalist Idols," *Harvard Business Review*, Vol. 11 (1933), p. 389.

runs this argument, which has had a wide vogue in the United States, England, and many other countries.

Closely related to it is a fourth reason frequently advanced in favor of national self-sufficiency by those who believe that the society of the future must be a planned order. Since planning of economic activity must replace laissez-faire, these people argue, and since planning means control, it is obvious that an important segment of industry cannot be left subject to the uncertainties of international commerce. Exports and imports must be reduced to the barest minimum and brought under control if the plan is to be made workable.

Conversely, it may be and has been maintained that the pursuit of anything approaching national self-sufficiency necessitates planning. A passage by a well-known writer sheds considerable light on the relation between these two goals:

Economic nationalism is indeed unthinkable *unless it be controlled*. It must be planned, and planned by the Federal government, even if the degree of self-sufficiency planned for is distinctly short of that indicated above (complete isolation) — as will undoubtedly be the case. To introduce it in a society of laissez-faire is economic suicide. It can only be undertaken when governments take power and speculative profit away from business men and bankers. Vast and delicate problems of adjustment are entailed, which cannot be left to the clumsy hands of high finance. New industries must be set up; old industries liquidated; industrial research for substitute commodities encouraged on a large scale; millions of potential unemployed steered to new jobs; colossal capital shrinkages adjusted in some fashion; such foreign trade as remains, rigidly budgeted by central authority. National planning and economic nationalism must go together or not at all.¹

Finally, one further argument for autarky which has come to prominence in the totalitarian states may be briefly stated. This is to the effect that self-sufficiency has a super-economic value of its own; an economically independent nation is somehow superior to one which depends upon imports from abroad. As one writer puts it, "To eat home-grown rhubarb

¹ Stuart Chase, "Autarchy — Is It the Economic Road of the Future?" *Scribners Magazine*, Vol. 94 (1933), p. 145.

has been held to be more virtuous than the consumption of the foreign lemon."¹

All of these varied arguments are, of course, reenforced by the widespread conviction expressed in the quotation from Mr. Keynes, that the benefits of international trade are less now than formerly and that the costs of repudiating international interdependence are correspondingly reduced. We shall consider the merits of this point later.

CAUSES OF THE SPREAD OF ECONOMIC NATIONALISM

The causes for the rapid spread in recent years of sentiment favorable to economic nationalism should be rather obvious, since they are closely related to the reasons advanced for such a policy. Of outstanding importance, of course, is the constant threat of war. The belief is well-nigh universal that another world conflict is unavoidable, that it is merely a question as to when it will break out. We are, indeed, rapidly becoming conditioned to regard war somewhere as a permanent state of affairs. Since 1931 two undeclared wars have been brought to a conclusion: the Japanese conquest of Manchuria and the Italian conquest of Ethiopia. At the moment of writing, Japan is carrying on an undeclared and ruthless war in China, while for over two years the Loyalist Government of Spain has been fighting the combined forces of Spanish reaction and Italian and German Fascism. The aggressive foreign policy of the Fascist and quasi-Fascist nations, the formation of the "Rome-Berlin axis," the conflict of interests of the "have" and the "have-not" nations, and the world armament race, all point strongly toward the probability of a major struggle as soon as the vital interests of a leading power are seriously threatened.

In such an atmosphere, it is hardly surprising to find sentiment in favor of a policy of national isolation appealing to many people in a country such as the United States, where the

¹ Lionel Robbins, "Memorandum on the Fundamental Reasons for Increased Protectionism," in *The Improvement of Commercial Relations between Nations*, Carnegie Endowment : International Chamber of Commerce, Paris, 1936.

economic basis for such a policy is probably more favorable than in any other nation. The drive for self-sufficiency in Soviet Russia, though traceable originally to a desire to build a planned socialist order, has in recent years been strongly intensified by the war danger. A similar result has been produced in Great Britain, where both war industries and agriculture have been the special object of governmental attention.

Germany and Italy have been impelled by the threat of war to seek to become as independent of outside sources of supplies as possible. In these countries, however, it can be fairly charged that the deliberate dissemination of an authoritarian political philosophy, with its worship of the powerful state, is chiefly responsible for the direction of national energies toward self-sufficiency and military preparedness. Both nations make no attempt to conceal their imperialistic ambitions, which are, indeed, in large part responsible for the growth of armaments and the spirit of nationalism elsewhere. The same holds true also of Japan, where, as is well known, the military clique is in virtual control of the government.

It is not solely to the war danger or the warlike spirit, however, that the growth of economic nationalism is to be attributed. Economic causes must likewise bear a large share of responsibility. Chief among these are the recent difficulties of the depression, in particular the disastrous fall in the prices of agricultural products, the difficulties experienced by many countries regarding their balances of payments, and the resultant actual or threatened instability of currencies. As we have seen, the price collapse led many agricultural countries to raise tariffs and to introduce exchange restrictions, while the loss of markets ensuing from such action and from the world-wide decline of purchasing power provided various other nations (e.g., Austria, Germany, Italy) with the excuse for similar steps. The widespread abandonment of the gold standard caused France and other countries of the gold bloc to resort to higher tariffs and the wholesale use of import quotas. Again, the introduction of the gold-purchase policy by the United States in the summer of 1933, followed by de-

valuation early in 1934, was in the nature of a declaration of monetary independence. The effect of all these separatist measures was to increase the isolation of the various national economies and to intensify the depression. Nonetheless, since each nation was injured by the independent action of others over which it had no control, the movement toward restriction simply fortified the position of those who preached isolation as the cure for an unstable interdependence.

Finally, so far as national self-sufficiency has been urged as the necessary complement of economic planning, responsibility must be laid at the door of the growing distrust of laissez-faire, which, in turn, is the result of certain important trends observable in the modern economy. With the spread of monopoly and imperfect competition, the appearance of strong trade unions, the introduction of unemployment insurance, and the regulation of public utility rates, the area within which competitive price adjustments operate to maintain equilibrium in the economic system has greatly diminished. At the same time, that system has become more complex and intricate, making effective and prompt adjustment more than ever necessary. This increased complexity has also made errors of judgment by business men, whose decisions determine the direction and level of economic activity, both more inevitable and more serious in their consequences. All these developments together render the capitalist economy increasingly unstable, thereby strengthening the case for planning the operation of the economic system. And it cannot be denied that a planned society will have to establish control over its foreign trade, even though this control stop short of complete self-sufficiency.

LIMITATIONS AND DIFFICULTIES OF A POLICY OF NATIONAL SELF-SUFFICIENCY

Whatever the degree of national self-sufficiency its advocates are willing to insist upon,¹ it is essential to a consideration of

¹ As a matter of fact, they are usually very indefinite about this. Thus Dean Donham, in the article cited (p. 394), says: "The assertion is frequently

the merits of their case that some account be taken of the limitations and difficulties of such a policy. Therefore this section will be devoted to a brief examination of the chief problems confronting a nation bent on the attainment of a high degree of economic independence. This task will, of course, be very different for an advanced industrial nation and a country with a relatively primitive economy. Here our concern will be exclusively with the former type.

A basic limitation on the achievement of national self-sufficiency by any modern industrial nation has been firmly established by nature. Industrial nations, by the very character and requirements of their economies, are dependent upon a multitude of varied raw materials. Very few of these needed supplies are distributed evenly throughout the world, but instead are concentrated in certain favored localities. Therefore, any country can hope for economic independence only to the extent to which it can establish control over sufficient sources of the necessary raw materials.¹

The situation of the Great Powers with respect to the essential industrial raw materials is indicated in the chart on page 504, reproduced from Dr. Brooks Emeny's study, *The Strategy of Raw Materials*. This shows, for each state, the percentage of domestic consumption provided from domestic production and from imports. The data on which the chart is based are the averages for the period 1925-29, with the exception of Russia, for which, unless otherwise noted, 1929-32 averages are used. As far as possible, Dr. Emeny has arranged the items "in order of relative importance in time of war, those to the left of the center being

made, that international trade is a necessary corollary of industrialism. To a limited extent of course this is true. No one wants to stop *essential* foreign trade. From our own standpoint, as the most self-contained of nations, the *minimum* of imports required to obtain *essential* raw materials is a necessary corollary of industrialization, but this can readily be secured in exchange for those home products which *must be exported*." (I have italicized certain words which surely require detailed interpretation.) And Mr. Keynes wishes to work "towards greater national self-sufficiency and economic isolation . . . in so far as it can be accomplished without excessive cost." (*Op. cit.*)

¹ We postpone for later consideration the possibility of producing substitutes for the natural raw materials.

STRATEGIC SITUATION OF THE GREAT POWERS

NATIONAL SELF-SUFFICIENCY IN ESSENTIAL INDUSTRIAL RAW MATERIALS

Expressed in Percentages of Domestic Production and Net Imports to Consumption

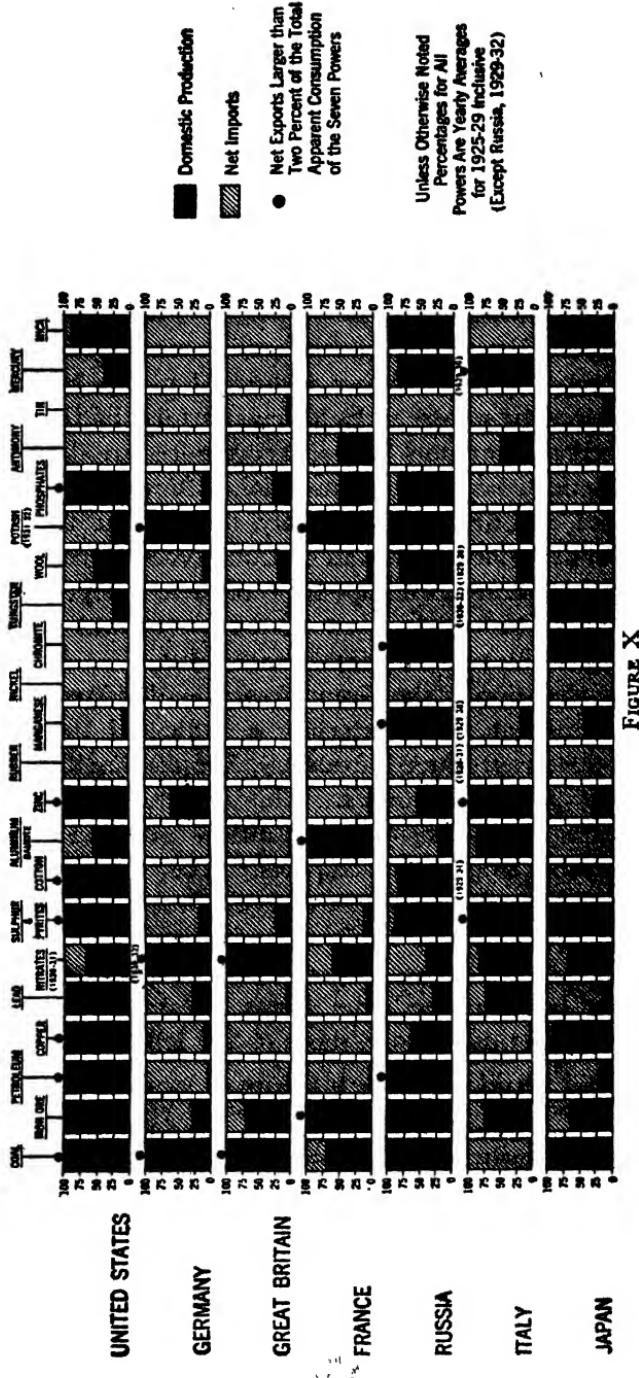


FIGURE X

of outstanding value."¹ Although the situation has in some respects changed since the period from which the data were derived, notably as regards the production of coal and petroleum in Italy and of the latter product in Germany, the chart still gives a substantially accurate picture.

It becomes abundantly clear that no single power can rely upon its own resources for even half of these twenty-two important products. The United States and Russia come closest to self-sufficiency, being capable of supplying 80% or more of domestic requirements in the case of ten and twelve of these commodities respectively. Even the United States, however, is largely or completely dependent upon imports for its supplies of rubber, the four steel alloys (manganese, nickel, chromite, and tungsten), antimony, tin, and mercury, while Russia must secure outside her borders more than half her requirements of lead, nitrates, aluminum, rubber, nickel, tungsten, antimony, and tin. The five other powers must look abroad for adequate provisions of all but a few of these essential raw materials, the lack of the most important products (coal to rubber, on the chart) being most conspicuous in the case of Great Britain and Germany.

Clearly, no nation can, under normal peace-time conditions, dispense with international trade altogether, but must supplement her domestic resources with substantial imports. It is this fact, together with her intense desire for economic independence, which is to a large extent responsible for Germany's wish to dominate Central and Southeastern Europe. If she could accomplish this, she could assure herself of ample supplies of petroleum from Roumania, aluminum from Hungary, and chromite from Yugoslavia, not to mention the foodstuffs (chiefly grains, eggs, and meat) which would also become available.

The relative strategic position of the seven Great Powers is changed somewhat, but not substantially, if to the normal domestic production of each country there is added that obtainable from "increased domestic output under the stress of

¹ *Op. cit.*, p. 20.

war" and from the production of "colonies and regions of control."¹ A second chart, also reproduced from Dr. Emeny's book, shows the potential war-time self-sufficiency of each of the seven countries with respect to the commodities in question by imposing dark areas upon the original import bars. This chart does not take into account the possibility of the production of substitutes, the piling up of stocks, or of secondary recovery (e.g., reclamation of used rubber). War-time as opposed to peace-time self-sufficiency thus appears possible, with respect to all but a small number of essential raw materials, for the United States, the British Empire, and Russia. The situation of France is much improved by the inclusion of colonial and potential war-time production, that of Germany, Italy, and Japan is little altered.

In the picture presented by this chart we see the basic reason for the strenuous efforts of Germany and Italy to encourage the production of substitute commodities and to limit the use of available foreign exchange to the purchase of the most essential raw materials. Although reliable data are not available, it is known that Germany has gone far with the production of benzol (a gasoline substitute) from coal, of oils from nuts, linseed, rapeseed, and other agricultural products, of artificial wool from milk, and of synthetic rubber. Glass is being used wherever possible in place of metals, as in tubes for paste, in cans, and in curtain rods. In addition to benzol, alcohol produced from wood is being used as a motor fuel. Similar efforts with respect to foodstuffs have rendered Italy self-sufficient, Germany nearly so.²

¹ Emeny, *op. cit.*, p. 171. Dr. Emeny assumes as the area of control for the United States "the larger part of the regions of Latin America, as well as Canada." For other countries, apparently only colonies are included.

² Only recently the following item appeared in *Time* (January 24, 1938): Because German bakers use 800,000,000 eggs a year in making their rich pastries, the Nazi Government was delighted to find a substitute by which it hopes to save 400,000,000 eggs a year. Out of 32 pounds of cheap fish is made a pound of extract which is supposed to be an adequate substitute for 160 hens' eggs. To make this extract palatable to Germans who had more than a bellyful of *Ersatz* (substitutes) during the War, and have been fed up with it again as a result of Nazi isolation policies, the Government hit upon an artful device: The new *Ersatz* will be called "Viking Eggs."

STRATEGIC SITUATION OF THE GREAT POWERS
POTENTIAL WARTIME SELF-SUFFICIENCY IN ESSENTIAL INDUSTRIAL RAW MATERIALS
Expressed in Percentages of All Sources of Supply to Consumption

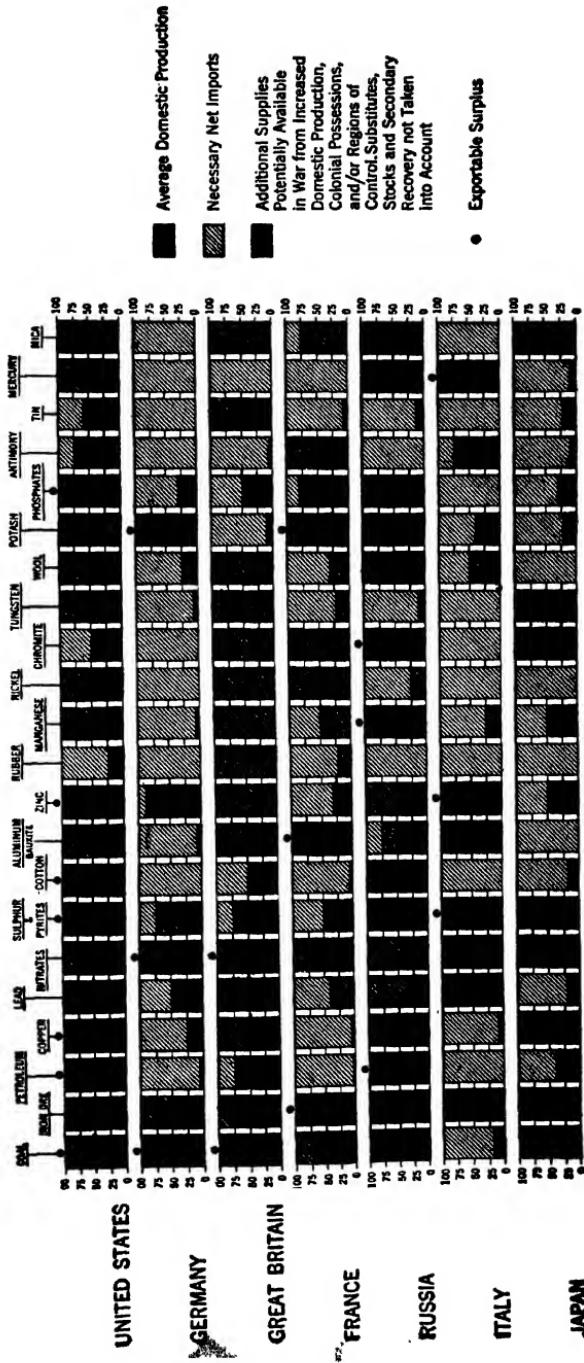


FIGURE XI

For a country which wishes to attain at least war-time self-sufficiency yet which has inadequate sources of supply of strategically necessary raw materials, there are only two alternatives: the production of substitutes or the piling up of stocks. Either choice, however, is costly, the latter because abnormal purchases of the commodities in question force up their prices (as in late 1936 and early 1937, when several countries were pursuing this policy), the production of substitutes because they can rarely be produced as economically as the natural articles they replace.¹ Thus, particularly in the resort to substitutes, an increasing proportion of the nation's resources must be devoted to preparation for war, a diminishing proportion to the satisfaction of the normal wants of the population. The inevitable result is a declining standard of living, which if serious may result in undernourishment, disaffection with the government, and military weakness.

MERITS OF THE CASE FOR NATIONAL SELF-SUFFICIENCY

A nation which, for political or military reasons, is determined to pursue a policy of self-sufficiency, will reckon the

¹ Some idea of the costs of the German program of self-sufficiency may be gained from the following quotation: "The campaign for greater self-sufficiency has exacted burdensome sacrifices from the German people. To increase agricultural output, subventions have been granted to producers of hemp, flax and wool, and prices averaging twice as high as world market levels have been guaranteed for soy beans, rapeseed, linseed and other oil seeds of domestic origin. German consumers have had to bear a shortage of many foodstuffs and attendant high prices. Although accurate data are lacking, the cost of most synthetic industrial materials is far above that of the natural imported products and the quality is often inferior. The price of synthetic benzine is said to be three and a half times the cost of imported gasoline, and the price of buna at least six times as high as that of natural rubber. Cloth woven from a mixture of cotton and cell wool is reported to cost 30 to 40 per cent more than pure cotton cloth. While prices of many of these products may ultimately become 'competitive' just as those of artificial silk and synthetic nitrates, the German people must meanwhile shoulder the burden. Moreover, the manufacture of synthetic materials has required the investment of an enormous amount of capital at a time when capital resources are slim. The benzine plants of the Dye Trust and the lignite combine alone are said to have cost half a billion marks. To carry out the Four-Year Plan, at least several billion more will be necessary." (*Foreign Policy Reports*, March 15, 1937. "The German Economic Dilemma," by John C. deWilde.)

costs outlined in the preceding paragraph as a minor obstacle. Strategic considerations will be predominant. Even from the point of view of such a country, however, it might be wiser to rely more upon the building up of stocks than upon a complete reorientation of the entire economy. For then it would be possible to maintain a higher standard of living and thus to avoid the danger of weakening the productivity and the morale of the people in advance of the outbreak of war. The deprivations of a closed economy are, it should be noted, permanent and cumulative. A strain which could perfectly well be borne for two, three, or four years may become intolerable if no relief is in sight.

Basically, to the argument that autarky is essential to military efficiency, the economist has no adequate reply. For this argument presupposes that the chief objective of the state is national power; economic welfare is but a secondary matter. The decision as to ends subordinates economic to political considerations.

It is rather different with the argument that avoidance of war makes imperative a policy of self-sufficiency. For here, even though the goal — the maintenance of neutrality — takes precedence over economic welfare, it is possible to indicate less costly ways of attaining this objective. Moreover, a strong case can be made against isolation as a means of avoiding war.

In the first place, it should be noted that only the United States, the British Empire, and Russia are in a position at all favorable to the enforcement of a policy of national self-sufficiency. These nations alone possess adequate food and raw-material resources or control areas in which they are to be found to permit them to sustain an industrial civilisation at a relatively high standard of living. For other countries, such as France, Sweden, Switzerland, or the Netherlands, the material basis for a policy of isolation is absent; to avoid war, they must find some other approach.

Although the three powers favored by nature might achieve virtual independence of trade with potential belligerents, it is imperative to point out that even they could do so only at

terrific cost.¹ If the United States, for example, were to attempt to become nationally self-sufficient, a wholesale redirection of our industrial forces would become necessary. For although our total exports are normally less than 10% of our total domestic production, certain important industries are vitally dependent upon the foreign market. The following table illustrates the degree of this dependence for a number of industries:

Percentage of Total Production Exported

Refined copper	67
Gum rosin	51
Cotton	50
Phosphate rock	50
Dried fruits	40
Gum turpentine	39
Aircraft engines and parts	37
Leaf tobacco	36
Lubricating greases	36
Crude sulphur	31
Tractors	30
Lubricating oil	30
Canned fruits	21
Lard	17
Radio apparatus	14
Industrial machinery	10

Source: *Summary of United States Trade with World, 1935*, Department of Commerce, Trade Information Bulletin No. 831. The figures are for one or the other of the years 1933, 1934, or 1935.

The elimination or drastic reduction of our foreign trade could only be brought about, without disaster to industries such as these, through the introduction of a large degree of deliberate and careful economic planning. Moreover, once the new industrial orientation had been effected, it would have to be permanent; a later reversal would be almost impossible. Therefore, in addition to the costs of transferring workers, of erecting new industrial plants, and of absorbing losses on useless plants, we should have to reckon the permanent cost of a lower standard of living involved in producing synthetic rub-

¹ This is less true of Russia than of the other two powers, since Russia's industrialisation is very recent and has from the beginning been given a nationalistic orientation. Likewise, for some twenty years, the Russian economy has been planned.

ber, substitutes for silk, tea, and other products, and in manufacturing numerous commodities for which this country is less well-equipped than others.

If, for the sake of argument, we agree with the isolationists that peace at any price should be our major objective, and that this is attainable only by cutting ourselves off from international intercourse, there is another form of isolation open to us. Permit foreign trade to continue on a cash-and-carry basis as long as the resources (cash and securities) of buyers last. For a short war, these purchases would suffice to maintain our export industries at a high level of activity. When they were exhausted, the inevitable slump could be offset by policies similar to those followed in the recent depression. By means of public works and work relief, the volume of employment could be supported, while direct relief to unemployed labor and bounties to export industries for output restriction (similar to measures worked out under the A.A.A. program) would in part at least compensate those injured by our pacific policy. So far as imports were concerned, we might have to practise great economy in the use of some products, but most of what we needed could be obtained from increased domestic production or from areas under our control. And what trade with the belligerents continued to exist could be concentrated on essentials such as rubber, obtainable elsewhere only in insufficient quantities.

Such a policy of temporary isolation would in all probability involve lower immediate costs than one of permanent self-sufficiency, while it would avoid altogether the long-run sacrifices of denying ourselves the benefits of international specialisation.

There are very definite inherent defects, however, in any attempt to avoid war by insulating ourselves against its economic consequences. In the first place, national isolation, whether temporary or permanent, means turning our backs on the rest of the world, refusing to accept any responsibility as a member of the community of nations. To many this will appear as both cowardly and selfish, inconsistent with our

position as a great power. Secondly, there is at least a serious possibility that even isolation of the most rigorous sort would not keep us out of war. Advocates of this policy tacitly assume that the primary cause of our entry into the last war was the desire to protect the profits of our swollen war trade with the Allies. Without examining closely the merits of this position, it may at least be pointed out that indignation over the invasion of Belgium, the sinking of the *Lusitania*, and the unrestricted German submarine campaign, together with fear as to the consequences of a German victory, were of inestimable importance in building up the moral fervor necessary to lead us to abandon our policy of neutrality. Is there any reason to believe that public opinion might not be similarly stirred on another occasion?

If the next war finds the democracies of France and Britain pitted against Nazi Germany, Fascist Italy and militaristic Japan, the cry of keeping the world safe for democracy will again make itself heard. The American belief in democracy and the hatred of fascism in many circles may give rise to a strong demand in favor of entering a war on the side of the democratic powers if they should be in danger of being overwhelmed by Fascist opponents. Should Paris and London be destroyed by bombing planes and poison gas, and the civilisation of European democracies be threatened by totalitarian states, would it be possible to "quarantine" American opinion so that it will remain completely "neutral"?¹

This is no place to discuss at length the primarily political problems of foreign policy; yet we may indicate at least one hopeful alternative to isolation for which considerable popular support exists. This is to cooperate with the democratic powers in resistance to aggression, in the form, on our part, of support to economic sanctions. If the European democracies, through pacts of mutual assistance and with our economic backing, make it clear that any act of aggression will mean war, and further, if they combine with this attitude a willingness to remedy the more serious grievances of the "have-not"

¹ Raymond Leslie Buell, *Chaos or Reconstruction?* Foreign Policy Pamphlets, January, 1937, p. 35.

powers, the danger of war might be indefinitely postponed. There is at least a reasonable possibility that the return of the German colonies, the undertaking of certain political and territorial adjustments in Europe, and the advancement of economic assistance to permit currency rehabilitation by Italy and Germany might appear more attractive than the uncertainties of war. By such measures, a reduction of armaments and a return to peaceful international progress might be made feasible. This alternative is, of course, only a possibility. It may be that nothing short of a wholesale surrender to the dictatorships will restrain their belligerence. If this be the case, war is inevitable, and it is difficult to believe that the United States could, under any conditions, long maintain her neutrality.

We turn now to a consideration of the argument that national self-sufficiency is desirable because it will promote greater internal stability, or at least permit independent action to combat instability. With respect to this point, little need be added to what has already been said in the chapter on Protection.¹

So far as disturbances are caused by changes in the relative efficiency of industry in different countries, they must be recognised as the price of international progress. Measures to moderate the rapidity of change would appear to be preferable to the avoidance of both change and progress. With regard to cyclical disturbances of business activity, the evidence indicates that those economies that are comparatively isolated are subject to just as serious fluctuations as those that are highly interdependent. It may be added that, short of complete planning, ample independence of action may be provided by a reasonable degree of monetary independence along the lines suggested in the preceding chapter. Since monetary and fiscal measures are the most hopeful weapons with which to attack the problem of the business cycle, resort to complete isolation should be unnecessary.

If, however, a planned economy is the only answer to our increasingly difficult economic problems, rigorous control of

¹ See pp. 318-321.

foreign trade, though not complete self-sufficiency, will be essential. The merits and drawbacks of planning, however, are beyond the scope of our discussion.

THE FUTURE OF SPECIALISATION AND OF INTERNATIONAL TRADE

In the foregoing discussion we have indicated some of the difficulties inherent in the pursuit of national self-sufficiency and called attention to the sacrifices involved in rejecting the benefits of international specialisation. Nowhere have we as yet met the challenge enunciated by Mr. Keynes and others, to the effect that these benefits are diminishing appreciably in magnitude — that, in Mr. Keynes' words, "national self-sufficiency may be becoming a luxury which we can afford." If this position be correct, then — given a nationalistic world — there is every probability that in the future, international trade will undergo a significant decline. In order to appraise the future of world trade, it is essential to consider this challenge in some detail.

Those who accept the foregoing position commonly assert that the spread of modern techniques greatly reduces the need for and the advantages of specialisation. This contention raises an issue which is fundamental. For if it be true, then the very basis of international trade is in the process of being destroyed. Quite apart from restrictive measures emanating from nationalistic sentiment, we may expect to witness a steady shrinkage, at least relative and possibly absolute, in the volume of world commerce.

Consideration of this problem may begin with a counter-assertion, the truth of which is obvious. *Since the benefits of international trade rest upon cost differences, the spread of technical knowledge will reduce the need for and the advantages of specialisation only so far as it tends to equalise costs of production everywhere.* Unless costs are equalised, the basis for profitable specialisation and trade remains. Unless cost differences are reduced, the benefits of trade are as great as ever.

Reflection indicates that the diffusion of modern techniques may or may not lead to a complete or partial equalisation of costs. As a matter of fact, any one of a number of different results may ensue. Let us consider the various alternatives in turn.

One important possibility is a change in the localisation of industry. This will tend to be the outcome when the new methods are more suited to the factor equipment and other relevant conditions governing the localisation of industry in the newer countries than to these underlying conditions in the country where the new techniques originated. If this be the case, specialisation and trade will continue, though with a new source of supplies. Thus the development of modern methods of manufacturing textiles originated in England, and this country became the great producer of both woollen and cotton fabrics. The acquisition of these modern methods by Japan, with a supply of the productive factors which appears to be even more suited to low-cost production under the new technical conditions, is leading to a transfer of at least large portions of the cotton textile industry to that country. It may be that Japan is peculiarly suited, because of her abundant supply of cheap labor, to the production of many types of cotton fabrics, as well as other commodities for which labor cost is a large proportion of total cost. In this event, she will doubtless become the chief supplier of these articles. The basis for international trade, though it has shifted its position geographically, still remains.

On the other hand, it is possible that the techniques originally developed in one locality may be so especially suited to the factor equipment, the transport facilities, and the social conditions of production of their place of origin that the industry or industries which depend upon them may show little or no sign of changing their localisation. This seems to be to a large extent true of the international banking business developed in London, of the automobile industry of the United States, and of the woollen industry of England. Even though other countries may possess the requisite technical knowledge,

their acquisition of such industries is prevented by the presence of adverse economic conditions which govern the application of the techniques in question. In this event, costs are not equalised, nor does it appear likely that possession of the technical knowledge will permit any significant reduction of cost differentials.

In indicating that the spread of new techniques to industrially young countries might result in a movement of certain industries to these areas, we were concerned only with the direct effects of this phenomenon. It is also possible that an indirect effect may be to decrease the profitability of developing other industries. For instance, the spread of the Industrial Revolution to the United States in the nineteenth century made it more profitable for us to produce many types of manufactures and relatively less profitable to engage in the production of many agricultural commodities, notably wool, mutton, hides, and beef. Similarly, the development of the chemical, dye, and electrical equipment industries in Germany in the late nineteenth and early twentieth centuries offered such large possibilities of profit that an increasing proportion of her resources were turned into those lines of endeavor, a declining proportion into textiles (especially woollen), ceramics, other manufactures, and agriculture. Likewise, the rapid progress of the cotton textile industry in Japan may make it less rather than more profitable to produce automobiles there even though some technical advances in the production of automobiles have spread to Japan.

Finally, it must be admitted that the diffusion of technical knowledge may, under certain conditions, bring about a parallel diffusion of industry. This will be the outcome when the particular techniques in question are suited to a fairly wide variety of conditions of factor supply.¹ Some types of modern technique appear to be of this widely adaptable

¹ All the other considerations governing the localisation of industry under any given state of industrial technique, such as transport facilities, both internal and external, and that collection of relevant conditions summed up in the phrase "social conditions of production," must also be taken into account.

sort.¹ When this is the case, the industries embodying these particular techniques will not be concentrated in a relatively small area, but will spread into a number of countries, where costs of production will differ by less than the costs of international transfer. So far as this diffusion of industry does occur, it is of course true that the volume of international trade in the particular commodities involved will be reduced.

Our survey of the various possibilities indicates that the mere spread of technical knowledge in itself proves nothing with respect to the advantages of specialisation. It may lead to a movement of certain industries from one country to another, while at the same time making the development of other industries in the newer areas unprofitable. It may cause no change in the location of industry. Or it may bring about a wide diffusion of some types of production. Correspondingly, cost differences may be increased, altered little or not at all, or largely eliminated. Any *a priori* generalisation as to what will always happen is unwarranted. The outcome of the spread of any particular kind of technical knowledge depends in each instance upon how well or ill the new methods are suited to the factor equipment, the transport facilities, and the social conditions of production in the different countries concerned.

Up to this point we have been concerned solely with the possible consequences of the spread to industrially young countries of techniques developed in the older countries, and in particular with the question as to whether this implies a likelihood of a considerable diminution in the basis for and the volume of international trade. Fears on this score we have seen to have a limited foundation. But it has also appeared that one important possibility of the spread of technical

¹ The cotton textile industry has frequently been cited as one which falls into this category. To some extent this conclusion may be true. Since it is based, however, upon the observed spread of this industry into many countries, most if not all of which have imposed protective duties on its products, it would be necessary to know how far similarity of basic conditions and how far these artificial barriers have been responsible for this development. Only a careful comparison of costs could provide a satisfactory answer.

knowledge is the loss by the older countries to the younger of certain of their established industries. This fact of industrial migration has led many people to voice another fear: namely, that the older nations are finished as industrial powers, that they must reconcile themselves to accepting a position of steadily declining importance.¹ This view is widely held, and deserves serious consideration. Is this fear justified, or is it also based upon a partial and limited view of the relevant circumstances?

As a first line of attack upon this problem, we may apply two of the conclusions drawn from the foregoing argument. As we have seen, some advances in technique have occurred in industries which, even under the new technical arrangements, continue to be better adapted to the underlying conditions of factor supply, etc., in the older countries. Just as individuals differing in their capacities will be differently affected by industrial change, some favored, some handicapped, so with nations. Again, we observed that a probable indirect consequence of the diffusion of modern technical methods was to reduce the profitability of developing certain industries in the newer countries at the same time and for the very reason that the development of other industries was becoming more profitable. It is to be expected that the latter class of industries would expand in the older countries.

A further consideration bearing upon the fear that such nations as England, Germany, and the United States must reconcile themselves to industrial decline has to do, not with the spread of technical knowledge already acquired, but with the continued progress of science and of its industrial applications. For even though *all* established techniques were adopted by those nations, like Japan, whose industries are in a stage of rapid expansion, further advances and discoveries would still continue to be made in the more mature industrial regions. No nation has a monopoly of progress and invention, as the records of national patent offices and of industrial development show. As new methods and new products are

¹ See above, p. 320, where the bearing of protection upon this question is analysed.

discovered in the older (as well as in the newer) countries, the gains from specialisation will shift to different commodities.

The idea that technical knowledge has now spread fairly evenly all over the world and has equalized the technical standards may cause us to lose sight of the fact that technical progress is still continuing. It is possible for any country to forge ahead of others, *but only in a limited number of branches of industrial activity*. Hence, it is only by concentration and national specialisation that technical progress can be maintained and the most up-to-date technique be utilized. In other words, specialisation leads to more rapid technical progress and the more thorough utilisation of new technical methods.¹

From what has been said above, moreover, it is clearly unnecessary to grant the implication of the "idea" formulated in the first sentence of this statement.² An equalisation of technical standards has indeed occurred, in the sense that scientific knowledge and modern industrial methods have become the common property of many nations, instead of remaining, as in the early phases of the Industrial Revolution, a monopoly of one country. But this involves no equalisation in the sense of an elimination of industrial differences and therewith of the basis for specialisation and trade. An increasing number of countries are becoming industrially mature, or more similar in their general characteristics. But important differences in detail, which provide the foundation for a profitable exchange of goods, will inevitably persist. Just as in the latter half of the nineteenth century Germany and the United States followed in England's industrial footsteps without bringing about any decline, either relative or absolute, in their trade with that country, so now other nations are pursuing a similar development with what we have every reason to believe will be identical results.³

¹ Bertil Ohlin, *International Economic Reconstruction*, p. 64 (italics mine).

² An idea expressly repudiated by Professor Ohlin in the context from which this statement is taken.

³ The growth of world trade (except in recent years) appears, in spite of tariff barriers and other obstacles, to have taken place at approximately the same rate as the growth of world production. On this point, see recent issues of the *World Economic Survey*.

Indeed, there is ample concrete evidence of the fact that the mutual exchange of goods continues to be highly advantageous. For in spite of high tariffs and other impediments to trade, a large volume of goods moves internationally, both between the raw-material-producing countries and the manufacturing nations, and within the latter group as well. This flow of commodities in spite of tariffs is proof that gain would ensue with a general reduction of these barriers, that the loss of retaining them is heavy, and that that loss would be further increased by raising them.

Although basic considerations with respect to the probable continuance of international trade are favorable, it is more immediate factors, primarily of a political nature, which are likely to exercise a more direct effect upon the course of trade in the near future. Any attempt to predict the outcome of these forces would be rash. We can only indicate in what direction they operate, and hope.

Chief among the favorable factors are the Tripartite Monetary Agreement and the Reciprocal Trade Agreements program of the United States government. The former has removed, at least for the time being, fears of monetary instability, and together with the American trade policy, has resulted in some moderate gains in the direction of freer trade. Further progress with the Trade Agreements program, particularly if a satisfactory bargain is concluded between Great Britain and the United States, will be beneficial to commerce. The signing of such an agreement might well be the prelude to further covenants between the United States and the various British Dominions. Because of the embodiment in these treaties of the most-favored-nation clause, the improvement of trade in which they result will not be confined to the signatories; both the exports and the imports of third countries will also increase. So far as these factors are concerned, the outlook is at least hopeful for a gradual reduction of barriers and stimulation of commerce over a large area.

Most other relevant considerations, however, are unfavorable. There is no sign of relaxation, on the part of the dic-

tatorships of Central Europe, in their pursuit of the goal of autarky. If this trend continues, it means that any expansion of trade will be largely confined to the democratic nations. This may be unfortunate for all concerned, but it in no way reduces the desirability to the latter countries of past or future reductions of trade barriers.

Then there is the general uncertainty in the international political sphere and the concomitant fear of war, for which the aggressive policies of the Fascist and semi-Fascist powers are at least immediately responsible. This atmosphere of uncertainty and fear has generated an armament race of unprecedented magnitude and is largely to be blamed for the spread of economic nationalism. Unless and until some settlement of international political issues is achieved which will remove the constant threat of aggression, military and economic disarmament will remain an impossibility. Thus it is with developments in the field of international politics that the outlook for international trade in the near future primarily rests.

INDEX

Adjustment, mechanism of, 175-272, 457 ff.
under gold standard, 175-242, 458-466
long-run, 215 ff.
short-run, 175, 196-214
and changes in supply of money, 205-208, 257-258
obstacles to, 462-466
requirements of, 200-201, 459-462
under paper currencies, 254-272, 466-483
conditioning elements, 270-272

Advantage, absolute *vs.* comparative, 67

Anderson, Karl L., 298 *n.*, 300

Angell, James W., 27 *n.*, 36, 85, 206 *n.*, 208 *n.*, 214, 219 *n.*, 228 *n.*, 242, 244 *n.*, 269

Arbitrage, 169-171
in goods, 190

Assumptions, of classical theory, 39, 69-70, 103-104
of general equilibrium theory, 89, 108, 117-118

Autarky, 276, 491-521

Automatic correctives, 163-169

Autonomy, credit, 485 ff.

Bagehot, Walter, 85

Balance of Payments (*see* Payments, balance of)

Balance of trade, "favorable," 160
"unfavorable," 160

Balance-of-trade theory, 12, 14, 19

Balances, foreign, 140 ff., 199, 222, 227, 471

Banking system, characteristics of, 179-184

Banks, as foreign-exchange dealers, 140-141
and foreign-exchange market, 137-141

Bargaining, tariff, 367-370

Barter terms of trade, 41, 45
determination of, 47-51

Bastable, C. F., 35, 36, 77, 78

Beach, W. Edwards, 242, 445 *n.*, 454

Beard, Charles A., 522

Berglund, Abraham, 378

Beveridge, Sir William, 285, 300, 308, 309, 311, 323, 341, 342, 345, 453, 454

Bilateral tendencies in trade, 413-415, 417-418

Bills of exchange, 136-141
demand and supply of, 142-157
discounting of, 202

Black, John D., 134

"Black" markets, 396

Blocked accounts, 393, 396

Bochler, Eugen, 521

Boswell, James L., 345

Brentano, L., 320 *n.*, 340

Brisman, Sven, 269

Brown, William Adams, Jr., 490

Buell, Raymond Leslie, 512, 522

Bullion, export of, 12

Bullionist doctrine, 14

Cairnes, J. E., 33-34

Capital, as a factor of production, 115-116
export and import of, 149
kinds of, 116

Capital charges, 61-63, 76-77

Capital movements, 192-193, 216-229, 261-266, 270-272, 402-403
long-term, 148-150
short-term, 193, 198-214, 256-257, 464 ff., 484 ff.
from England, 211; France, 212;
Germany, 211
into United States, 214
monetary effects of, 205-208
as source of instability, 209-214, 465

Cartel, aluminum, 436
 incandescent lamp, 437
 International Steel, 436, 440

Cartels, international, 436-437

Carver, T. N., 336 *n*, 338 *n*, 345

Cassel, Gustav, 244 *n*, 250, 252, 269

Central banking, functions, 180-182
 instruments, 182 ff.
 operations, 180-182, 197-198, 205 *n*

Chadbourne Plan, 441

Chamberlain, Hugh, 11

Chamberlin, Edward, 426 *n*, 433

Chase, Stuart, 499

Clearing agreements, 407-423
 advantages and disadvantages, 416-421
 alternatives to, 421-422
 and bilateralism in trade, 413-415, 417-418
 and bounties, 412
 deflationary influence of, 415
 and exchange stability, 418
 and limitation of exports, 411
 nature of, 408-409
 purpose of, 408
 requirements of, 409
 tendencies under, 409-411

Clement, Samuel, 15

Cohn, David L., 346

Combinations, international, 425, 434-445
 advantages and disadvantages of, 443-445
 effects of, 443-445
 forms of, 435-438
 and government support, 440-441
 surrounding conditions, 438-441
 and tariffs, 442-443

Comparative cost, 25-28, 45-46, 50, 84

Competition, imperfect, 231-232, 235-236, 263, 297, 424-425
 Japanese, 305-306
 perfect, 231-232, 235, 263, 296-297, 426-428

Concerns, international, 437-438
 linoleum, 438
 in rayon, 437
 Unilever, 438

Condiffe, J. B., 421 *n*, 521

Control, monetary, 483, 487

Cost differences, absolute, 40-43, 49-50
 comparative, 25-28, 45-46, 50, 84
 equal, 44

Costs, constant, 39
 and import duties, 291-292

Costs, decreasing, 64, 106-107, 297-298, 448 ff.

and barter terms, 64
 and import duties, 295-298

Costs, increasing, 63-65
 and import duties, 291-295

Costs, real, 78-80, 286-288

Costs of transport, 69, 125-131

Creditanstalt failure, 210

Credit crisis, of 1931, 210-211

Crompton, George, 345

Culbertson, W. S., 362, 363 *n*, 368, 378

Currie, Lauchlin, 214, 242 *n*, 264 *n*

Customs, annexation, 348
 area, 348
 duties, 348-351
 union, 348

Dean, Vera Micheles, 522

Demand, reciprocal, 29-32, 48-50, 96, 98, 100, 269

Demand and supply of exchange, 142-157, 197
 elasticity of, 164-169, 197, 262, 264-265, 267, 270-272

Depreciation, exchange, 475, 480, 487

Devaluation, 212, 405, 421
 of American dollar, 271 *n*, 394

Differentiation of product, 425, 430-432

Disequilibrium, in balance of payments, 188, 195-196, 234, 458
 industrial, 189, 190-191, 234-235, 259-261
 investment, 189, 191-193, 216-229, 261-266
 monetary, 189, 193-194, 237-242, 266-268
 trade, 189-190

Distance, economic, 127, 129 *n*
 geographical, 127, 129 *n*

Disturbances, in balance of payments, 189, 193-205, 216-242, 257, 259, 261, 266, 458-461

Divisibility of factors, lack of, 106-107

Dollar, gold, U. S., 177

Domestic trade, forces governing, 23-24

Donham, Wallace B., 498, 502, 503 *n*, 521

Drawback, 299

Dumping, 425, 445–454
 advantages and disadvantages of, 451
 effects of, 450–452
 exchange, 446
 kinds of, 446–447, 451
 sporadic, 446–447
 systematic, 447, 451
 nature of, 445–446
 price, 447–450

Duties, anti-dumping, 452–454

Duties, customs, cost of, 289

Duties, export, 348–349

Duties, import, ad valorem, 349–351
 direct effects of, 290–298
 indirect effects of, 298–299
 ineffective, 289
 object of, 349
 preferential, 354, 365
 specific, 350–351

Duties, McKenna, 379

Duties, protective, 289, 349
 discriminatory, 289–290

Duties, Safeguarding, 379

Economics and ethics, 278–280

Economics, of combination, 444
 external, 297–298
 internal, 297

Edminster, L. R., 378

Einzig, Paul, 391 *n*, 392 *n*, 396, 416–419, 423

Elasticity of demand, 31, 35, 48–49, 260, 262–265, 270–271, 428, 448, 479
 and import duties, 295, 298–299

Elasticity of supply, 225, 231–232, 235–236, 262–263, 270, 479
 of factors, 121–122
 and import duties, 294–295

Ellis, Howard S., 214

Emeny, Brooks, 503, 506 *n*

Equal cost differences, 44

Equation of international demand, 31, 34

Equilibrium, in balance of payments, 187–195, 253, 458, 462
 general, 91–94
 industrial, 189, 190–191
 investment, 189, 191–193
 monetary, 189, 193–194
 trade, 189–190

Exchange, speculation in, 154–156

Exchange control, 390–397, 407–408
 avoidance of, 395–396
 and blocked accounts, 393, 396
 and bounties, 394
 effects of, 402–404
 exchange restrictions, 392
 in Germany, 211, 395
 gold policy, 391 *n*, 394
 intervention, 391
 meaning, 390–391

Exchange Equalisation Account, British, 391, 471 *n*, 472, 484

Exchange rates, fixed, 185, 254–258, 459 ff., 467
 flexible, 255, 258–259
 fluctuations in, 16, 17, 152–155, 171, 469–473, 476 ff.

Exchange Stabilisation Fund, American, 391, 395, 471 *n*, 472

Exchange stabilisation funds, operation of, 470–473

Exports, and foreign exchange, 143–144
 and imports, relation between, 301–303
 as surplus production, 28–29

Factors of production, interregional movements of, 123–124
 meaning of, 109–112
 qualitative differences in, 108–116
 variations in supply of, 89, 94–95, 98–99, 119, 121–122, 133

Fascist countries, 500, 512

Foreign exchange, 135–174
 forward, 171–173, 477
 under gold standard, 184–186

Free trade, 275–276, 281–288
 advantages of, 281–284
 opposition to, 284–285
 political weakness of, 342–345

Freight rates, differential, 127–129

Furniss, E. S., 13, 36

Gains from trade, 51–53, 120, 282–288

Garver and Hansen, 297 *n*

Gee, Joshua, 11

Gideonse, Harry D., 490

Gold bullion system, 178

Gold currency system, 177

Gold-exchange standard, 178

Gold, maldistribution of, 465 *n*

Gold movements, 187-188, 200-201, 485
 Gold points, 185-186
 Gold standard, 175-184
 abandonment of, by Great Britain, 211, 465
 automatic, 180, 483-484
 and monetary equilibrium, 237 ff.
 obstacles under, 462-466
 operation of, 458-462
 Graham, Frank D., 269, 300, 321 *n*, 345
 Gregory, T. E., 490
 Griffin, C. E., 174, 289 *n*, 345
 Grunzel, Joseph, 359

Haberler, Gottfried von, 72, 228 *n*, 242 *n*, 257 *n*, 269, 285, 294 *n*, 298 *n*, 300, 308 *n*, 313, 316, 317, 321, 326 *n*, 341 *n*, 345, 355, 356, 359, 378, 386, 448 *n*, 452, 454
 Haight, F. A., 387 *n*, 389 *n*
 Hall, N. F., 302 *n*, 471 *n*, 490
 Hamilton, Alexander, 314, 315
 Hansen, Alvin H., 297 *n*, 490
 Harris, S. E., 490
 Harrod, R. F., 72, 79, 80, 173, 174, 242, 269, 332 *n*, 346
 Hecksher, Eli F., 9 *n*, 13 *n*, 36, 345
 Hedging, 171-172, 477
 Hilgerdt, Folke, 423
 Howe, Quincy, 498 *n*
 Hull, Cordell, 369, 370, 371
 Hume, David, 16-18, 22, 309

Import quotas (*see* Quotas, import)
 Imports, and exports, relation between, 301-303
 and foreign exchange, 144
 Increasing cost, 63-65
 and dumping, 449-450
 and import duties, 291-295
 Indebtedness, international short-term, 213
 Individualism, 21
 Industrial Revolution, 22
 Infant-industry protection, 314-318, 341
 Interest and dividends, 147-148
 Interest rates, differences in, 149-153, 191 ff.
 International demands, changes in, 229-234, 259-260
 International goods movements, causes of, 23, 95, 101
 International price relationships, 16, 22, 27, 32 (*see also* Prices)
 International specialization (*see* Specialization, international)
 International trade, future of, 514-521
 International trade theory, purposes of, 37
 International transactions, capital, 160
 commercial, 142-147
 current, 160
 financial, 142, 148-153
 speculative, 142, 154-156
 Investments, foreign, earnings on, 147-148
 long-term, 148-150, 464
 and the rate of exchange, 166-169
 short-term, 150-153
 of the United States, 377 *n*
 Invisible items, 15, 34
 Iversen, Carl, 214, 219 *n*, 242, 269
 Jones, C. F., 134
 Kahn, R. F., 326 *n*
 Keynes, J. M., 228 *n*, 269, 326 *n*, 327, 333 *n*, 341, 394 *n*, 490, 494, 521
 Keynes, J. N., 279 *n*
 Killough, Hugh B., 134
 Kindleberger, C. P., 206 *n*, 208 *n*, 214, 219 *n*, 470, 471 *n*, 490

Labor, sub-groups, 109-114
 influence of heredity and environment on, 110, 114
 negro and white, 112 *n*
 Labor-cost theory of value, 23, 39, 74, 80-81, 86
 Laissez-faire, 20, 499
 Large-scale production, economies of, 297, 444
 and interregional trade, 105
 Leakages of expenditure, 327
 Licensing, of imports, 382 *n*, 384-385
 List, Friedrich, 314-315, 342 *n*
 Loans, international, 148, 381 (*see also* Capital movements)
 Locke, John, 15
 Log-rolling, 344
 MacGregor, D. H., 439 *n*, 454
 Malynes, Gerard, 14

Marginal revenue, 429, 448-450
 Marshall, Alfred, 34, 36, 75, 300
 Mason, Edward S., 85
 Maximisation of income, 279, 281 ff., 314, 338-339
 McIsaac, A. M., 426 *n*
 Meade, J. E., 490
 Mercantilism, 9-13, 308
 Mill, John Stuart, 17, 23, 26, 28-32, 36, 39 *n*, 48, 315 *n*
 Mobility of labor and capital, 5-6, 40, 74, 82, 89, 110-112, 286
 Monetary agreement, tripartite, 486, 489, 520
 Monetary policy, 181-183, 228-229, 237, 266-267, 277, 460-463, 468 *n*, 485, 513
 Monetary problems, domestic, 456
 international, 455-490
 future of, 483-490
 Money cost, as basis for international trade theory, 79-80
 and justification of free trade, 285-288
 Money, international distribution of, 15, 17, 22, 26
 Money wages, 42-43, 46-47, 54-57
 Monopoly, 289, 297-298, 424-454
 Chilean nitrate, 441
 Japanese camphor, 441
 price, 428-430
 Most-favored-nation treatment, 361-365
 and trade-agreements program, 372-373
 "Multiplier," and protection for employment, 326-328
 Mun, Thomas, 14
 Myers, Albert L., 426 *n*
 Nation *vs.* region, 6, 131-132
 National self-sufficiency, 276, 404-405, 422, 491-522
 in Germany, 496-497
 in Italy, 496-497
 limitations of, 502-508
 merits of case, 508-514
 and military efficiency, 495, 509
 and planning, 499, 502, 510
 rationale of, 495-500
 spread of, 500-502
 and various countries, 505-506
 National treatment, 361
 Nationalism, 9, 276, 404-405, 491 ff.
 of depression, 380-381
 post-War, 379-380, 492
 Natural resources,
 classification of, 115
 as a factor of production, 115
 Nicholson, J. S., 35
 Nomenclature, tariff, 351-352
 Non-competing groups, 33, 57-60, 74-76, 109-114, 286
 North, Dudley, 15
 Nurkse, Ragnar, 219 *n*
 Ohlin, Bertil, 83, 84, 85, 86, 87, 91, 95 *n*, 100-102, 112 *n*, 113, 114, 115, 117, 125, 133, 134, 214, 219 *n*, 228 *n*, 242, 252 *n*, 269, 421, 519, 521
 Oligopoly, 433-434
 Orchard, John E., 346
 Ottawa Conference, 365
 Overvaluation, 247, 410, 412, 462, 485
 Page, T. W., 344 *n*, 346
 Palyi, Melchior, 490
 Paper currencies, and exchange depreciation, 475, 480
 and inflation, 473-474
 supposed dangers of, 473-483
 Par, mint, 185-186, 244
 purchasing power, 244-249
 calculation of, 246
 criticisms of, 250-254
 deviations from, 247-249
 Paranaguá, O., 357 *n*, 359, 361 *n*, 378
 Patten, S. N., 345
 Payments, balance of, 157-161, 163, 187-196, 200-201, 407-408
 of the United States, 158
 Payments, international, clearing of, 139, 141
 initiation of, 139
 mechanism of, 136-161
 Peek, George N., 521
 Petty, Sir William, 11, 15
 Pigou, A. C., 190, 245 *n*, 250, 269
 Planning, 499, 502, 510
 Plant, A., 446 *n*
 Plummer, Alfred, 435, 436, 437, 438, 444, 454
 Policy, evaluation of, 278-280
 monetary (*see* Monetary policy)
 Pollexfen, John, 11

Popper, David H., 378

Price specie-flow mechanism, 15, 16, 17, 22, 43, 46, 51, 217-218

Price theory, 425-434
dumping, 447-450
monopoly, 428-430

Prices, commodity
changes in, 225, 232 ff., 460
and depression, 401-402
differences in, 98, 133
equalisation of, 118-119
flexible *vs.* rigid, 463, 467

Prices, of factors, 92 ff., 119-120, 133
relative (*see* Relative prices)

Productive factors, re-allocation of, 229, 231, 234-235, 261 ff.

Protection, 275-276, 282, 285-288, 301-346, 492 ff.
administrative, 356-358
case for, 301-346
to conserve natural resources, 321-322
to equalise costs of production, 310-313
and equilibrium in balance of payments, 341, 393-394
of home market, 306-307
and import of means of production, 341
to increase output, 307-308
and increasing *vs.* decreasing costs, 322-323
of infant industries, 314-318
informal, 358-359
to keep money at home, 308-309
and labor's share, 335-339
and military defense, 340
as pump-priming, 335
to reduce unemployment, 324-335
for retaliation and bargaining, 309-310
and risks of specialised industries, 318-321
of standard of living, 304-306
and tax burden, 311-313
tendency to spread, 342-343
and urbanisation, 339-340
and vested interests, 342-343
wide acceptance of, 342-345

Purchasing power, primary expansion of, 220
secondary expansion of, 222-223
transfer of, 201-202, 254-258

Quantity theory of money, 15, 22, 39

Quota, tariff, 382 *n*

Quotas, import, 379-390
administration of, 383-384
effects of, 386-389
and exports, 389
evaluation of, 389-390
in France, 383
global, 384
meaning, 382
purposes of, 388-389

Rate of exchange, determination of, 162-169, 243
equilibrium, 244, 253-254, 268-269
fluctuations in (*see* Exchange rates)
and goods traded, 96-99

Real costs, 78-80, 286-288

Relative prices, differences in, 90-91, 94, 99
identical, 90, 94, 107

Reparations, German, 381
transfer difficulty, 228

Reserves, bank, 179-180, 198 ff., 220 *n*, 222
central bank, 181-182, 198 ff., 223-224, 237-238, 256, 257 *n*
foreign-exchange, 198 ff., 223-224, 460
gold, 465 *n*

Restrictions, on immigration, 277
on trade (*see* Trade restrictions)

Ricardo, David, 23-28, 36, 39 *n*

Risk, 116-117
of exchange-rate fluctuations, 171-172, 198-199, 255, 460, 476

Robbins, Lionel, 279 *n*, 499-500, 521

Roberts, D. W., 36

Robertson, D. H., 473, 474 *n*, 490

Rousiers, Paul de, 454

Rowe, J. W. F., 442, 454

Rubber restriction plan, 349, 441

Sayre, Francis B., 378

Schattschneider, E. E., 346

Securities, international purchase and sale of, 148-149, 193 *n*, 199

Senior, Nassau, 32

Serra, Antonio, 14

Services, international, and foreign exchange, 144-145

Simons, Henry C., 490

Simpson, Kemper, 522

Sinclair, Huntly M., 36, 72
 Smith, Adam, 18-23, 36, 283
 Smith, James G., 378, 426 *n*
 Smith, Mark A., 359
 Social conditions of production, 116-117, 133, 516 *n*
 Specialisation, international
 advantages of, 19-20, 281-282, 494
 dangers of, 318, 320, 498
 future of, 514-521
 Standstill agreements, 211, 393, 465
 Steuart, Sir James, 17
 Stocks, piling up of, 506
 Structure of prices, changes in, 251
 Structure of production, changes in, 403-404
 Substitutes, 506
 "Viking Eggs," 506 *n*
 Supply conditions, 92 ff.
 changes in, 234-239, 261 ff.
 Tariff, autonomous, 353-354
 bargaining, 367-370
 conventional, 353-354
 double, 353-354
 and bargaining, 369-370
 enumeration, 352
 flexible, 368-369
 multiple, 353-354
 single, 353
 and bargaining, 367
 Smoot-Hawley, 379, 493
 Underwood, 491
 of United States: 1890, 367; 1897, 377; 1922, 368-369, 492; 1930, 352, 379, 493
 Tariffs, and classical theory, 70
 and customs duties, 348-351
 effects of, 290-299
 kinds of, 353-354
 measurement of height of, 354-356
 nature of, 289-290
 structure of, 351-353
 Taussig, F. W., 35, 37 *n*, 43, 59, 60, 62, 72, 75, 134, 218, 228, 242, 265 *n*, 285, 300, 305 *n*, 310, 316 *n*, 345
 Technique, spread of, 516-519
 Thornton, Henry, 27 *n*
 Tippett, Charles S., 521
 Tourists' expenditures, 145
 Trade, effects of, 118-123
 gain from, 51-53, 120, 282-288
 obstacles to, 125-131
 Trade Agreements program, 276 *n*, 370-378, 405, 421, 520
 apparent contradiction, 376
 method, 371-372
 purpose, 371
 trade under, 374-376
 Trade restrictions, consequences of, 397-406
 growth of, 276, 379-382, 407
 Transfer moratoria, 393
 Treaties, commercial, 360-367
 Undervaluation, 247, 475-476, 485
 Valorisation, Brazilian coffee, 440
 Valuation, for customs purposes, 349 *n*, 350 *n*
 Value, general equilibrium theory of, 5, 86-87, 91-94, 99
 Value, labor-cost theory of, 23, 39, 74, 80-81, 86
 Variable proportions, 78, 79, 92 ff., 286-287, 336
 Viner, Jacob, 13 *n*, 36, 72, 134 *n*, 200 *n*, 210, 285, 286, 359, 364, 445 *n*, 453, 454
 Wages, 33, 42, 46, 54-61, 82, 111, 121, 304-306, 336-337
 Wagner, A., 320, 339
 War, consequences of, 491
 debts, 381
 fear of, 319, 405, 422, 495, 500, 521
 isolation against, 509-513
 Wealth, identification of money and, 10-12, 19
 Webb-Pomerene Act, 440
 Welfare, economic, 279, 285
 Whaley, Barrett, 104, 161, 174, 242, 346, 364 *n*, 378
 Wheatley, John, 244 *n*
 Whitaker, A. C., 174, 214
 White, Harry D., 214, 219 *n*, 242
 Whittlesey, Charles R., 475 *n*, 476 *n*, 477 *n*, 478 *n*, 482, 489, 490
 Williams, John H., 82 *n*, 85, 484 *n*, 490
 Wilson, Roland, 219 *n*, 242
 Winslow, E. M., 357 *n*, 359
 World Court, 366
 World Production, 400
 World Trade, 398 ff.
 Wright, Quincy, 490
 Zimmerman, Erich W., 134